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ABSTRACT

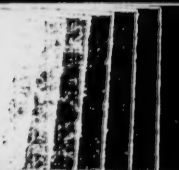
This SPEC (Systems and Procedures Exchange Center) Kit presents the results of a survey of Association of Research Libraries (ARL) member libraries designed to investigate the changes in research library systems operations since 1994 and to identify future trends. A total of 70 of 124 ARL member libraries responded to the survey. A copy of the questionnaire with tabulated results is presented. Representative documents include: (1) organization charts from the University of California-Los Angeles, Cornell University (New York), University of Florida, George Washington University (District of Columbia), Indiana University Bloomington, University of Iowa, University of Manitoba, Massachusetts Institute of Technology, Universite de Montreal (Quebec) Northwestern University (Illinois), Ohio State University, Temple University (Pennsylvania), Texas A&M University, University of Virginia, Washington State University, and Wayne State University (Michigan); (2) mission statements from the University of Hawaii at Manoa, Indiana University Bloomington, Temple University, University of Tennessee, Texas A&M University, and Wayne State University; position descriptions from the University at Albany-SUNY (State University of New York), University of Hawaii at Manoa, Indiana University Bloomington, Michigan State University, Temple University, and University of Western Ontario; (3) policy and procedure statements from the University of British Columbia and Temple University; and (4) evaluation documents from the University of British Columbia, Cornell University, Ohio State University, and Vanderbilt University (Tennessee). A list of selected resources, including five books and 33 Web sites, is

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November 2002

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MANAGEMENT SERVICES

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SPEC



Library Systems Office Organization

A SPEC Kit compiled by

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November 2002

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Library Systems Office
Organization
November 2002

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SPEC



SURVEY

ASSOCIATION OF RESEARCH LIBRARIES



OFFICE OF LEADERSHIP AND
MANAGEMENT SERVICES

Executive Summary

Introduction

In 1994, when the survey for SPEC Kit 211 *Library Systems Office Organization* was conducted, the growing popularity of the Internet/World Wide Web and advances in information technology were starting to cause dramatic changes in library systems functions and organization. Systems offices were managing far more than the traditional library management systems, bibliographic utilities, databases, and networks, including a myriad of new Internet-based services and resources. The overwhelming trends were: more staff for the systems office, more hardware and software to support, more resources in electronic format, and more library services delivered to remote users. The environment had begun to change from mainframe to client-server architecture, from stand-alone to networked, and from independent to integrated. The 2002 survey was designed to investigate the changes in research library systems operations since 1994 and identify some of the directions of future trends.

Today, change and growth in the number and types of library information technologies and digitized resources continue unabated, as evidenced by the advent of new interoperability standards and protocols; the proliferation of digital image, text, and audio collections; and the move toward seamless patron-initiated electronic services and resources. The survey's results show that systems organization, staff, and functions have changed markedly to meet these increased demands. The results and respondents' comments describe trends and challenges that may affect library systems operations and research well into the future.

Survey Results

This survey was distributed to the 124 ARL member libraries in June 2002. Seventy libraries (56%) responded to the survey. A large majority of respondents confirmed that their libraries employ staff dedicated to operating, maintaining, and/or servicing computers and networks (100%), library Web sites (94%), library digital services/projects (93%), integrated library systems (ILS) (91%), and other information technology initiatives (83%). When the library does not employ dedicated staff, it is most often in the area of ILS management, usually because the library either participates in an ILS consortium or shares management responsibility with departments other than the systems office. A few respondents noted, as well, that responsibility for library Web sites and digital projects is either shared or falls into the purview of other library departments.

Organization and Administration

Fifty-eight of the responding libraries (83%) organize systems-dedicated staff in centralized units and twelve (17%) distribute these staff across their organizations. In separate comments, however, a few respondents expressed concerns about the centralized/distributed dichotomy of the question, stating that another model might include a complex combination of the two types. These concerns will be addressed in the conclusion of this report.

Sixty percent of respondents report that the organizational structure of the systems office has changed since 1994. More than half of the centralized units (32, or 55%) have reorganized; all but two of the distributed organizations have changed. The explanatory comments offer many detailed and disparate reasons for that change. Whether the structure is centralized

or distributed, there are some common factors among the explanations. New units were created to handle evolving systems-related areas (e.g., digital library projects and multimedia services). Computer support changed from centralized to local units, and vice versa. Workloads increased (e.g., management of library information technology moved from a nonlibrary unit to the library systems office). Systems-related functions shifted to other departments (e.g., responsibility for the ILS moved to technical services). Institutional or departmental priorities were revised.

Respondents who identified their systems organizations as distributed were asked to describe them. The descriptions include a complex variety of schemes that seem to mirror the complicated array of services handled by the organization. Four typical structures emerge from the comments: the library systems unit is responsible for the ILS; there is a separate unit that supports digital library activities; library Web site management responsibility is shared by staff in all library units; a separate unit manages desktop computers, public workstations, and/or microcomputer labs (e.g., a workstation support staff member dedicated to individual library units). Over time, the trend seems to be that when a new service is introduced, a group of staff who has the necessary skills is organized to manage the activity. As the systems-related activity becomes more commonplace and additional staff become familiar with it, some tasks are being distributed to other people/units across the organization.

Name and Size of the Centralized Systems Unit

Respondents who identified their organizational structure as centralized were asked to complete the survey. Three respondents who described their organization as a hybrid also completed the survey for the centralized aspects of their systems activity. Most names of the centralized units contain some variation of the phrase "library systems," "information technology," or "library information systems." The units may be "departments," "services," "offices," or "divisions." A few units are "teams." Other keywords in the names include "digital," "electronic resources," "computing,"

"automation," and "media." While "library systems" and "systems department" have been the most common names since 1990, there has been a slight decrease in this designation and a dramatic increase in variations on "library information" and "information technology," perhaps reflecting the broader range of services provided today.

The number of staff members (FTE) in the centralized units ranges from a minimum of four to a maximum of thirty, with an average of eleven. The overall increase in the number of systems staff seems to be continuing from the previous survey. In that survey, 75 respondents reported a total of 504 systems staff in 1990 and 691 in 1994. In the current survey, 61 respondents report a total of 690 staff.

Titles and Reporting

Titles for the head of the centralized unit vary across the responding libraries, but in minor ways. For example, most titles do contain one of three common key words, but only a few libraries use the exact same titles as any other library, i.e., "Head, Systems Department" (3), "Assistant University Librarian for Information Technology" (2), and "Director of Information Technology" (2). Changes in the most common titles since 1990 indicate that the level of responsibility of this position has been increasing. In 1990, the top three titles included the designation Head (38%), AUL (22%), and Librarian (13%). In 1994, Librarian dropped to 1% and there was an increase in both Head (39%) and AUL (29%). Manager joined the top three with an increase from 7% to 13%. In 2002, Manager dropped to 8% and was replaced by Director, which jumped from 9% in both 1990 and 1994 to 23%. At the same time, there was a decrease in both Head (32%) and AUL (18%).

There has been a noticeable shift upward in reporting levels since 1990. At that time, 43% of the heads of systems offices reported to a dean or director of libraries, while 53% reported to an AUL. In 1994, 47% reported to a dean or director and 49% reported to an AUL. In the current survey, 60% of respondents report to a dean or director and 40% report to an AUL. This shift is another indication that the level of responsibility of the head of the systems unit has increased.

Operating Budget

Eight institutions responded that budget information was not available; another eight reported that there is not a separate systems office budget. When budget information was provided, the figures varied widely from a low of \$15,000 to a high of \$3,500,000. The majority of the budgets are in the \$300,000 to \$700,000 range. Respondents noted, however, that items covered under these budgets could also vary widely. For example, while some budgets included salaries, special one-time allocations, and/or maintenance contracts, others did not. Clearly, the budget allocations for systems operations are as varied as the organizational structures for these units.

Location

Ninety-three percent of respondents described the library building as the place where systems staff work. The seven percent who reported otherwise listed locations ranging from a "Library Processing Centre" to an "office building near the campus."

Staff Education and Training

Most, although not all, of the responding libraries have at least one staff member with an M.L.S. in the systems unit. Many have multiple staff members with an M.L.S. degree, with one library reporting six. Five libraries report having no staff with the M.L.S. degree in their systems unit. Numerous respondents mentioned staff with master's degrees in technology-related subjects. At least eight systems organizations have one or more staff members with a Ph.D. As expected, several libraries employ staff with degrees in computer science, ranging from technical certification to bachelor's degrees to master's degrees. A small number of respondents employ staff with only a diploma or associate's degree. In addition, one M.B.A. and one J.D. were reported.

Respondents indicated that on-the-job training and software or hardware vendor-sponsored certification/training were the most used and most effective ways for staff to gain their technical expertise. Other methods were relied upon as well—such as undergraduate and graduate degree

programs, and workshops sponsored by the parent institution, library, or professional association—but were found to be somewhat less effective in gaining the technical expertise in question. The survey results seem to provide support, however, for the remarks of one respondent, who noted that appropriate academic education and professional training are valued components in gaining an overall foundation of knowledge in most professional assignments.

Results show that only 25% of the respondents expect librarians to have the same level of technical expertise as other professionals in the systems office; a clear majority (75%) indicated that they do not have such expectations. In explaining why, most respondents described distinctions for work assignments allowing for specialization between librarians and programmers/technologists. For example, some respondents noted that higher-level or day-to-day technological functions, such as server administration, programming, and network management, were assigned to technologists, whereas librarians were expected to have more library management or administrative skills, applications expertise, and a strong foundation of general technical knowledge. A few respondents indicated that librarians were the technical overseers, collaborators, generalists, or coordinators on the teams. The emphasis on specialization in some of the comments, however, seems to indicate that in a number of the libraries, *all* professional staff are expected to contribute differing levels and types of technical expertise. The expertise depends more on the requirements of a particular job assignment or project than necessarily the degree held by the staff member.

Changes in Unit Size and Systems Office Staff

Survey respondents were asked whether 10 systems office factors had increased, decreased, or remained the same since 1994. Overwhelming increases are seen in the number of computers and equipment maintained, networked library services offered, software products supported, and budget. Moderate increase has occurred in the number of both male and female staff employed. The continued

proliferation of computer applications, emerging technologies, and massive growth of the Internet and World Wide Web are perceived by many of the respondents as the catalysts behind these changes. Increased user expectations and easier access to the new technologies, according to most respondents, has resulted in a new, broader vision of service with a focus on Internet delivery of Web-based services.

Staff turnover rates are perceived to have stayed relatively stable since 1994, in the majority of cases, with librarian retention slightly higher (72%) than other systems professionals (61%) and nonprofessionals (64%). The stability is attributed, in most remarks, to the downturn in the broader technology job marketplace (e.g., the "dot-com bust" was mentioned by more than one library) and/or strong staff commitment to libraries. Some sites that had higher turnover rates attributed it to better pay and competitive opportunities in the nonlibrary job market.

Systems Office Responsibilities

Between 1994 and 2002, every major category of systems-related activity increased. Significant increases are reported in the number of systems offices handling Web-based interlibrary loan requests (2 vs. 35), wireless networks (2 vs. 25), electronic reference systems (2 vs. 23), electronic reserves (5 vs. 37), digitization and/or imaging (6 vs. 35), intranets (11 vs. 47), and library Web site interfaces (22 vs. 51). Some of these increases are attributed to the fact that the technologies were newly developed since 1994. The next highest increases are in library Web site management, computer lab maintenance, electronic resource licensing, and cooperative ventures. A relatively consistent number of libraries continue to be responsible for the ILS, hardware/software purchasing, microcomputer repair, and applications implementation.

While many libraries are taking on responsibilities for digitization/imaging, e-reserves, wireless networks, and e-reference, a significant number of respondents noted that other library units or departments share these responsibilities. The same is true for electronic resource licensing

and electronic reference. The parent institution's computer center is most often responsible for e-mail administration, WANs, wireless networks, and other network backbone support. There is a modest amount of outsourcing, mainly for microcomputer repair and training.

Challenges

The top systems challenge libraries report is management of expanded, new, and more complex services—such as digital resources delivery, wireless networking, and supporting distance users—along with a simultaneous lack or reduction of staff and funding to support these services. Other commonly listed challenges include hiring, training, and retaining staff with the necessary range of skills; personnel cutbacks and inadequate funding for salaries that leads to turnover and too-heavy workloads for remaining staff; management of digital initiatives; network management; technical training for staff; implementation of a new ILS; integration of technologies; and maintenance of electronic resources, links, and licenses.

Evaluation

All of the responding libraries are involved actively in the evaluation of their systems office services. Most use a variety of techniques. A majority track Web site usage (77%) and the number of service calls and hardware/software installations (74%). About half conduct user and staff surveys, including using the LibQUAL+™ instrument. Interviews and focus group sessions are used by slightly fewer than half. Other forms of evaluation include downtime tracking, turnaround time on service calls, regular review of annual goals, and periodic retreats.

Respondents were asked to indicate their impressions about the quality of their library systems office performance with respect to nine categories of service. After indicating their expectations for the minimum level and desired level of service on a scale of 1 to 9, they were asked to rate their perception of their library's actual performance level. On average, the respondents have fairly high expectations for both the minimal and desired performance level,

though providing training and imaging services seem to be somewhat less important than the other categories. Regardless, they did not give themselves high marks when asked to assess their own library's performance on these tasks. As a group, the responding libraries rate their performance as below the minimum performance level in five of the nine categories—network installation and maintenance, hardware and software training, developing Web site interfaces, managing the Web site, and providing imaging and digitizing services. They collectively indicate that their perceived performance is above the minimum performance level for hardware and software installation and maintenance, developing and implementing new applications, supporting networked information resources, and supporting online library services, but in all areas the library's performance falls short of the desired performance levels. Although the reasons for the poor self-ratings were not disclosed, the scores clearly indicate dissatisfaction with systems offices' ability to meet their own service expectations.

Conclusion

Digital systems, services, and resources are proliferating, technology is becoming ever more accessible, and libraries are evolving to meet the resultant users expectations and demands. While the survey's results clearly show that many libraries do maintain distinct systems units to handle most of this work, the authors observed that future surveys about the "systems office" and its likely organization may become more difficult to design and analyze as libraries are transformed by new technologies. Any assumptions, for example, about systems-dedicated staff members belonging to one division, centralized or not, must be questioned. At the very least, the boundary between what a "systems office" *is* (a unit handling library information technology) versus what a "systems office" usually *does* (information technology functions) is getting more blurred. For example, is a technical services department a "systems unit" if it manages the ILS? Is an instructional services librarian who writes Web-based programs performing "systems" tasks? The assumed definition of the "systems office" is called

into question as information technology continues to permeate libraries and reshape their strategic directions, services, and resources.

Reflected more so in the respondents' comments than in the actual survey statistics, many libraries are sharing their increasingly complex and growing technological workloads in collaborative ways—in large diffused units, in distributed models throughout various departments, or within consortia. In most cases, they are doing so to adapt to institutional pressures or meet heavy user demands as they simultaneously grapple with budget cuts and rapidly shifting priorities. For example, several libraries noted that the systems unit's functions were dispersed into specialized systems teams or tiers of support, while others described the branching off of new technological projects or programs (e.g., the management of multimedia labs or digitization projects) into entirely separate units, sometimes having the same reporting lines, sometimes not.

The conclusion of the 1994 survey mentioned that, as libraries became more dependent upon information technology, there was a corresponding need for more involvement from the systems office. The 2002 survey illustrates the extent to which the dependence on electronic information systems continues to grow, this time, requiring a corresponding need for increased involvement from *many* units within the library. Eventually, there may be no library service or resource without—at some level—a major "systems" component. Systems staff members and, increasingly, many other staff members must remain flexible, knowledgeable, and open to change as they help their libraries manage the new technologies and meet users' needs successfully.

SPEC Kit 271

Library Systems Office Organization

Survey Results

ARL member libraries were last surveyed about the organization and responsibilities of the library systems office in 1994. That survey investigated the changes that had occurred in the systems office between 1990 and 1994. The survey results indicated that the overwhelming trends were "more" and "different"—more staff for the systems office, more hardware to maintain, more software applications to support, more resources in electronic format, more library services delivered to remote users, more complicated relationships between systems and computer center staff. The environment had also changed from mainframe to client-server architecture, from stand-alone to networked, from locally mounted to Web-based, from independent to integrated.

The past eight years have seen equally dramatic changes in information technology, library services, staff responsibilities, and organizational efforts to manage these changes. Through this survey the investigators hope to document the changes in research library systems operations since 1994 and identify some of the directions of future trends.

This survey is focused on the library staff members who are working on the implementation, planning, operation, and management of:

1. Integrated library systems (ILS)
2. Computers and networks
3. Library Web sites
4. Library digital services/projects
5. Other information technology initiatives

This survey was designed by Scott P. Muir, DALNET Assistant Director, and Adriene Lim, Systems Librarian, Wayne State University.

Please submit this survey and send the requested documentation by **June 24, 2002**. As always, individual responses to the survey will be treated confidentially.

Note: Seventy of the 124 ARL member libraries (56%) responded to the survey.

Background

1. Does the library employ staff who are dedicated to operating, maintaining, or servicing any of the systems or services listed below? (n=70)

	Yes	No
Computers and networks	70	0
Library Web sites	66	4
Library digital services/projects	65	5
Integrated library system (ILS)	64	6
Other information technology initiatives	58	7

If no, who has this responsibility?

While most respondents reported that designated staff have responsibility for the library's Web site, several respondents indicated that this responsibility, or some parts of it, is shared by many library staff members. This is also the case for digital services/projects.

A consortium typically maintains the ILS for the respondents that don't have dedicated staff for this task. Two libraries indicated that their ILS is partially managed by the university computer center. Other information technology initiatives include electronic classrooms and digital library-related projects.

Organization and Administration

2. Are these staff organized into a centralized service unit (e.g., library systems office) or distributed across the organization? (n=70)

Centralized unit	58	83%
Distributed	12	17%

Is this the same organizational structure as in 1994? (n=70)

Yes	28	40%
No	42	60%

If no, what was the reason for the change? (n=42)

Whether the organization is centralized or distributed, the reasons for change since 1994 are similar. The majority of respondents reported that an increased workload, increased use of services, or new services—such as ILS management, microcomputer support, digital projects, Web services, and electronic publishing—led to the addition of staff to handle the work and eventually to departmental reorganization. In some cases, new departments were created; in others, units were consolidated. Several respondents pointed out that the library systems office didn't exist in 1994. One respondent cited new facilities as a reason for change.

If you answered "Centralized unit" above, please continue to question 3.

Several respondents explained that they had both centralized and decentralized units that performed systems-related work and completed the following questions on the centralized unit.

If you answered "Distributed" above, please describe the structure and indicate how many library staff (FTE) have responsibility for library systems, computers, Web sites, etc., then submit the survey.

Responses from the distributed organizations can not be tabulated. Please see the Executive Summary for a synopsis of these organizational descriptions.

3. What is the name of the centralized unit? (n=61)

The name of the centralized unit varies quite a bit, although the most common names are variations of "Library Systems," "Systems Department," and "Information Technology." The most common key words in the unit names are:

Systems	38
Library	31
Technology	22
Information	21
Department	19
Services	14
Office	7
Division	5

Other unit names include the key words media, automation, computing, digital, and networking.

4. How many staff (FTE) are in the unit? (n=61)

Minimum	Maximum	Mean	Median	Total
4	30	11.37	11.00	690

5. What is the title of the head of the unit? (n=60)

Head	19	32%
Director	14	23%
AUL	11	18%
Manager	5	8%
Team Leader/Manager	4	7%
Librarian	2	3%
Chair	2	3%
Officer	2	3%
Administrator	1	2%

6. To whom does this position report? (n=60)

Dean/Director/University Librarian	36	60%
Assistant/Associate/Deputy	24	40%

7. What is the operating budget for the unit? (n=58)

Eight institutions responded that this information was not available; another eight reported that there is not a separate systems budget. Reported budget amounts range from a low of \$15,000 to a high of \$3,500,000. The majority of the budgets fall within the \$300,000–\$700,000 range. The survey did not ask what the budget covered, but a number of respondents added clarifying comments. At least seven respondents indicated that salaries were not included in the systems office budget, but were part of the general library budget.

8. Is the unit located in the library building? (n=61)

Yes	57	93%
No	4	7%

If no, please describe the unit's location.

Three respondents reported that parts or all of the systems office are in a building adjacent to the library or elsewhere on campus; one reported that the systems office is located off campus along with technical services.

Staff Education and Training

9. What degrees do library systems office staff hold? (n=61)

B.A./B.S.	49	80%
M.L.S.	49	80%
M.A./M.S.	24	39%
Ph.D.	9	15%
Associate's	8	13%
Certification	5	8%
Diploma	3	5%
M.B.A.	1	2%
J.D.	1	2%

10. What techniques have library systems office staff used to gain their technical expertise? Check all that have been used and the three that have proven most effective. (n=62)

	Used	Most Effective
On-the-job training	59	59
Software or hardware vendor-sponsored certification/training	59	46
Undergraduate degree programs	50	16
Graduate degree programs	44	15
Parent institution-sponsored workshops	43	11
Library-sponsored workshops	41	7
Professional association-sponsored workshops	34	7
Other, please explain	12	11

Other sources of training include:

Private training organizations	5
Self-paced training products and software	3
Peers	3
Conferences	1
Trial & error	1

Please identify associations that sponsored workshops.

The most commonly identified associations providing training were:

LITA	11
State associations and regional networks	10
ALA	9
ASIS	4
Educause	4
CNI	4

11. Are librarians and other professional staff in the library systems office expected to have the same technical expertise? (n=60)

Yes 15 25%
No 45 75%

If no, please explain.

Five respondents clarified that there are no librarians in the systems office. The majority of respondents explained that distinctions in work assignments allow for specialization in the department between librarians (M.L.S. degree) and programmers/technologists. At most of the responding institutions, all staff, including librarians, are expected to have solid technical skills.

Library Systems Office Changes

12. Please consider the changes that have occurred in the library systems office since 1994. Indicate whether the elements below have increased, decreased, or stayed about the same. (n=61)

	Increased	Decreased	Stayed Same
Number of pieces of equipment supported by the systems office	61	0	0
Number of networked library services (e.g., ILL requests, e-reserves, book renewals, e-reference, etc.) supported by the systems office	60	1	0
Number of systems office staff	58	0	3
Number of software products supported by the system office	58	2	0
Systems office budget	52	0	6
Number of male systems office staff	45	4	12
Number of female systems office staff	37	4	20
Turnover rate for other systems professionals	15	9	37
Turnover rate for nonprofessional systems support staff	14	3	39
Turnover rate for systems librarians	7	7	44

If there have been changes, to what do you attribute them?

Key changes in services and equipment include:

- New focus on Internet delivery and Web-based services; less focus on the ILS.
- Greatly increased use of and dependence on technology, microcomputers, servers, etc.
- Growth of library consortium activities.

Key changes in staffing include:

- Turnover, especially due to better salaries outside the library.
- More staff due to greater volume and demand for service.
- Some sites report more women in technology; some report fewer.

Library Systems Office Responsibilities

13. Please indicate for which of the following activities the systems office had major responsibility in 1994 and for which it has major responsibility today. Check all that apply. (n=64)

If the library systems office does not have responsibility for a particular service, please indicate whether the service is:

- 1) Obsolete
- 2) The responsibility of another library department
- 3) Provided by a consortium of which the library is a member
- 4) Provided by an application service provider (ASP)
- 5) Provided by the parent institution's computer center
- 6) Outsourced to a commercial service
- 7) Other—please describe below

	1994	2002	% Change	1	2	3	4	5	6	7
Web-based ILL requesting	2	35	94%	2	26	2	0	0	1	2
Wireless network	2	25	92%	1	0	0	0	28	0	4
E-Reference	2	23	91%	3	31	0	1	0	3	6
E-Reserves	5	37	87%	2	23	2	0	0	0	4
Digitization and/or imaging	6	35	83%	1	25	1	0	2	1	5
Intranet	11	47	77%	1	3	0	0	7	1	3
Library Web site interfaces (including ILS interfaces)	22	52	58%	1	7	3	0	0	0	3
Library Web site management	24	49	51%	1	10	0	1	0	0	5
Computer lab maintenance	17	30	43%	3	5	0	0	24	0	2
Electronic resource licensing	9	15	40%	3	41	1	0	0	0	2
Local, regional, state cooperative ventures	26	41	37%	1	12	9	0	0	0	3
WANs	13	18	28%	1	0	0	0	36	0	1
Networked CD ROMs	37	48	23%	9	2	1	0	0	0	1
Locally-designed systems, programs and/or applications (Please describe below)	37	47	21%	2	5	0	1	1	3	2
Applications development	44	56	21%	0	4	0	2	3	2	1
Configuring workstations	52	61	15%	0	2	0	0	1	0	0
LANs	43	50	14%	0	0	0	0	11	0	1
Supporting PC software products	50	58	14%	0	3	0	0	5	0	4
Applications implementation	52	60	13%	0	5	0	0	2	0	1
E-mail administration	23	26	12%	1	1	0	0	37	0	0
Hardware/software training classes	26	28	7%	2	10	1	2	18	6	5
Microcomputer repair	43	41	5%	0	0	0	0	9	12	3
OCLC, RLIN, etc.	35	36	3%	0	18	1	0	0	0	3
Hardware/software purchasing	54	56	3%	0	5	0	0	2	0	0
Stand-alone CD ROMs	47	48	2%	5	7	0	0	0	0	0
Integrated library system (ILS)	50	51	2%	0	4	8	0	1	0	2

Please describe the locally designed systems indicated above.

The most commonly mentioned locally designed system was an interface with administrative systems and technical services functions. Others with several mentions include digital products and access to local databases; room booking; electronic reserves; ILL and document delivery system; and administrative and business tools. A few respondents mentioned database-driven Web sites, copyright management, e-reference systems, helpdesk, and information literacy tools. The most commonly mentioned software was MySQL. CGI and Perl were the second most frequently mentioned tools.

Please explain which "Other" entity has responsibility for a system or service.

The most commonly mentioned "other" entity was the computing center—telecommunications and networking. Additional entities include technical services, digital center, circulation/borrower services, information services/arcade, access services, training, and instructional support. Several respondents mentioned that they are making increased use of outsourcing.

Challenges

14. Please list the top three challenges the library systems operation in your institution will face in the next two years. (n=58)

Staffing:	hiring, retaining, training competent staff with extraordinary skills
Funding:	for staff compensation, equipment replacement/upgrade, new services; coping with budget cuts; stretching fixed budgets
New services:	new ILS, digital initiatives, wireless technology, system security, electronic publishing, multimedia
Integration:	easy-to-use access to the wide variety of electronic resources and services
Keeping up:	with new technologies, skills, demands for service, pace of change

Evaluation

15. What techniques does the library use to evaluate the effectiveness of systems office services? Check all that apply. (n=61)

Track usage of Web pages, ILS, etc.	47	77%
Track the number of service calls	45	74%
Track the number of hardware/software installations	45	74%
LibQUAL+ survey	33	54%
Interview internal users (e.g., library staff) of the services	32	53%
Conduct user surveys	30	49%
Interview external users (e.g., faculty, students) of the services	28	46%
Conduct focus groups	28	46%
Other, please explain	10	16%

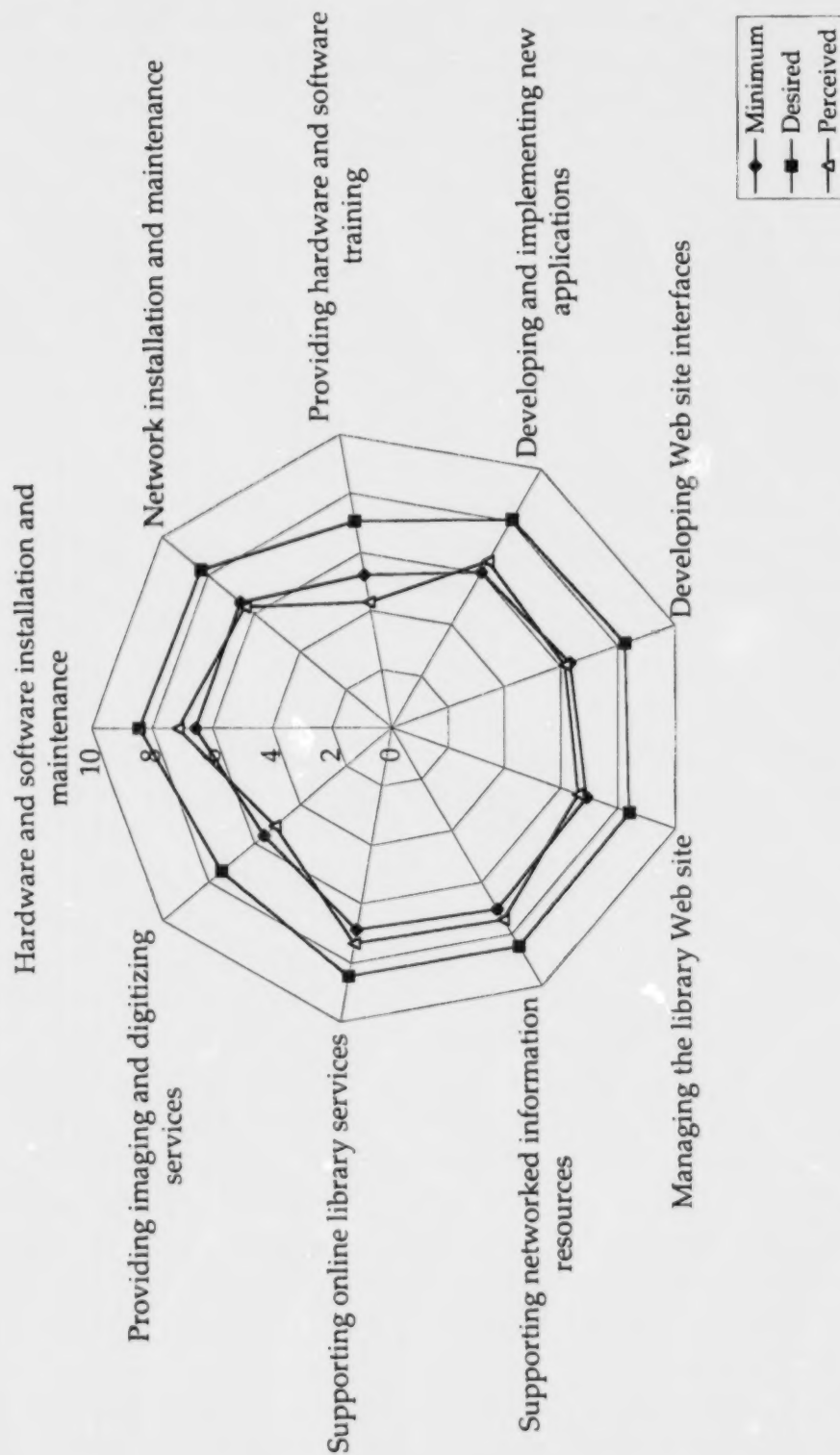
Other forms of evaluation include tracking downtime and turnaround time on service calls, using Web-based tracking systems, external and internal review, and planning retreats.

16. We would like your impressions about the quality of your library systems office's performance relative to your expectations. For each of the following statements, please:

- (a) Choose one of the numbers in the first column to indicate the **minimum** performance level you consider adequate for your library to achieve;
 (b) Choose one of the numbers in the second column to indicate the level of performance you **desire** from your library; and
 (c) Choose one of the numbers in the third column (or N for no opinion) to indicate your **perception** of your library's actual performance level.

When it comes to...	The Minimum Performance Level Is:			The Desired Performance Level Is:			My Perception of My Library's Actual Performance Is:		
	Mean	Std Dev	n	Mean	Std Dev	n	Mean	Std Dev	n
Hardware and software installation and maintenance	6.54	1.3	59	8.42	.93	60	7.13	1.3	60
Network installation and maintenance	6.58	1.8	53	8.30	1.6	53	6.37	2.9	60
Providing hardware and software training	5.23	1.9	53	7.07	2.2	54	4.32	2.6	60
Developing and implementing new applications	6.02	1.4	59	8.07	1.0	60	6.47	1.6	60
Developing Web site interfaces	6.34	1.4	56	8.28	1.0	57	6.15	2.3	59
Managing the library Web site	6.89	1.2	58	8.41	.99	58	6.59	2.1	58
Supporting networked information resources	7.02	1.5	59	8.45	1.2	60	7.42	1.7	60
Supporting online library services	6.86	1.5	59	8.43	1.2	60	7.32	1.7	60
Providing imaging and digitizing services	5.58	1.8	52	7.43	1.7	53	5.10	2.7	57

Perceptions of Library Systems Office Performance



Additional Comments

17. Please submit any additional information regarding library systems office operations at your institution that may assist us in accurately analyzing the results of this survey.

Comments submitted for this question—and for the description of the organizational structure under question 2—highlight that in a number of responding institutions there are both centralized and decentralized approaches to providing the range of services covered by this survey. The organizational structures can be quite complex and are unique to the needs of the individual institution. One respondent cautioned that portraying systems office functions in libraries as either centralized or dispersed doesn't adequately capture all the possibilities.

SPEC Kit 271

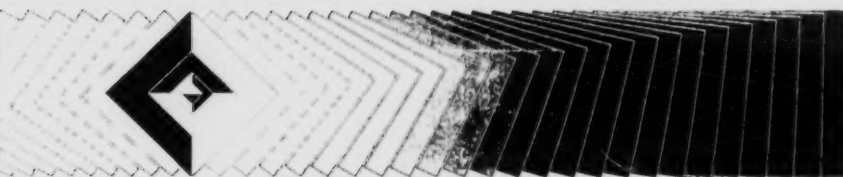
Library Systems Office Organization

Responding Institutions

University of Alabama
University of Alberta
Arizona State University
Auburn University
Boston College
Brigham Young University
University of British Columbia
Brown University
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
Case Western Reserve University
University of Chicago
University of Connecticut
Cornell University
University of Delaware
Duke University
University of Florida
Florida State University
George Washington University
University of Guelph
University of Hawaii at Manoa
Howard University
University of Illinois at Urbana-Champaign
Indiana University Bloomington
University of Iowa
Iowa State University
Johns Hopkins University
Kent State University
University of Kentucky
Université Laval
Library of Congress
Louisiana State University
McGill University

McMaster University
University of Manitoba
University of Maryland
University of Massachusetts, Amherst
Massachusetts Institute of Technology
Michigan State University
University of Minnesota
Université de Montréal
National Library of Canada
University of Nebraska-Lincoln
University of New Mexico
University of North Carolina at Chapel Hill
Northwestern University
Ohio University
Ohio State University
University of Pennsylvania
Pennsylvania State University
Purdue University
Rice University
Rutgers University
University of South Carolina
Southern Illinois University Carbondale
University at Albany, SUNY
Syracuse University
Temple University
University of Tennessee
University of Texas at Austin
Texas A&M University
Tulane University
Vanderbilt University
University of Virginia
Virginia Tech
Washington State University
Wayne State University
University of Western Ontario

SPEC



REPRESENTATIVE DOCUMENTS

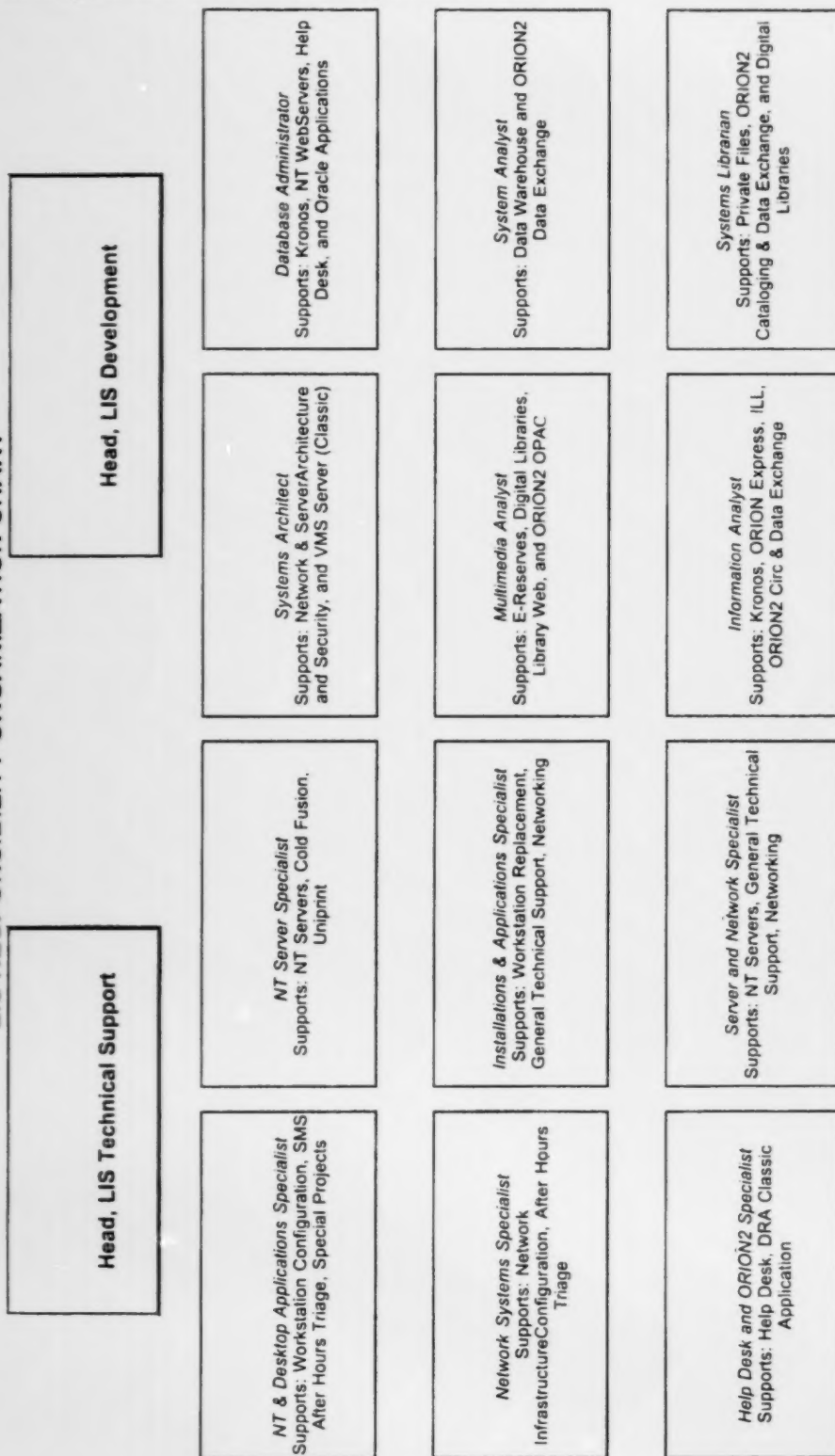
ASSOCIATION OF RESEARCH LIBRARIES

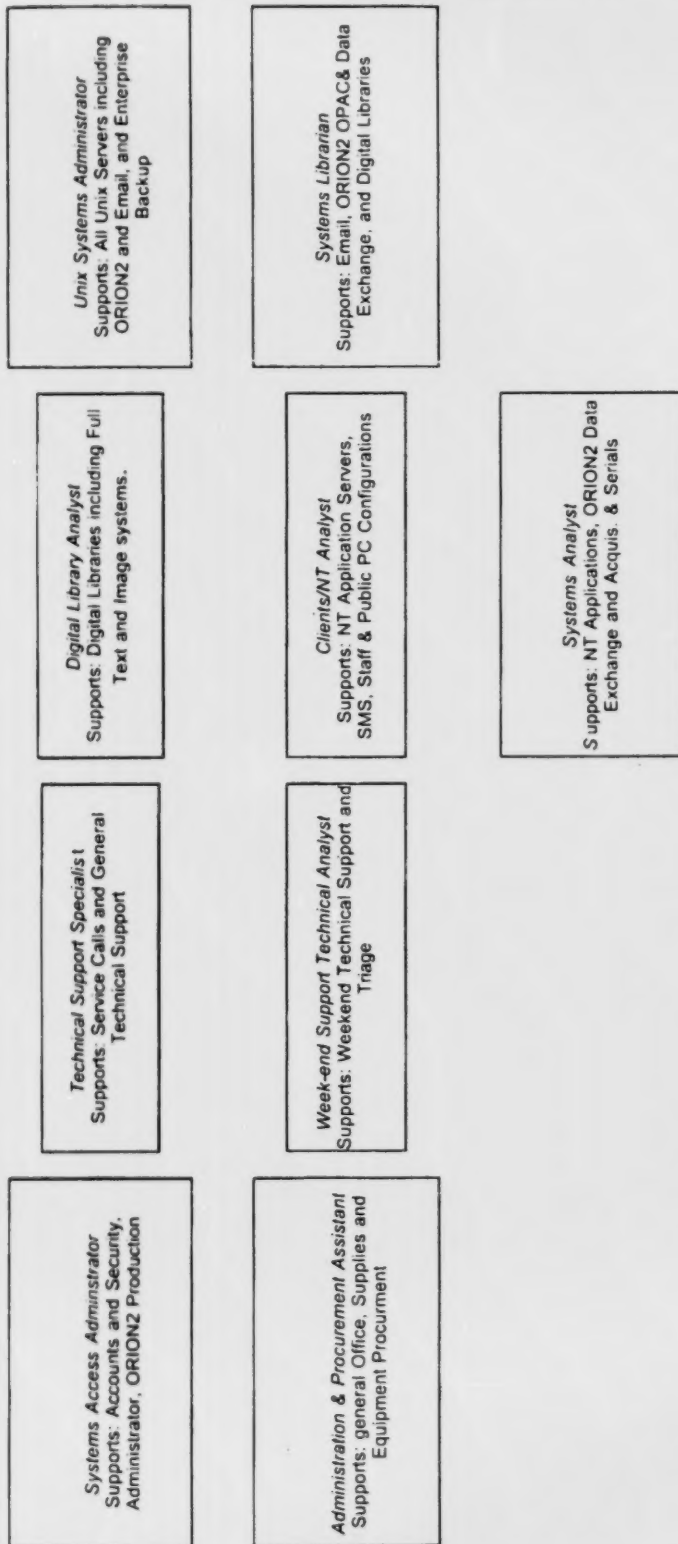


OFFICE OF LEADERSHIP AND
MANAGEMENT SERVICES

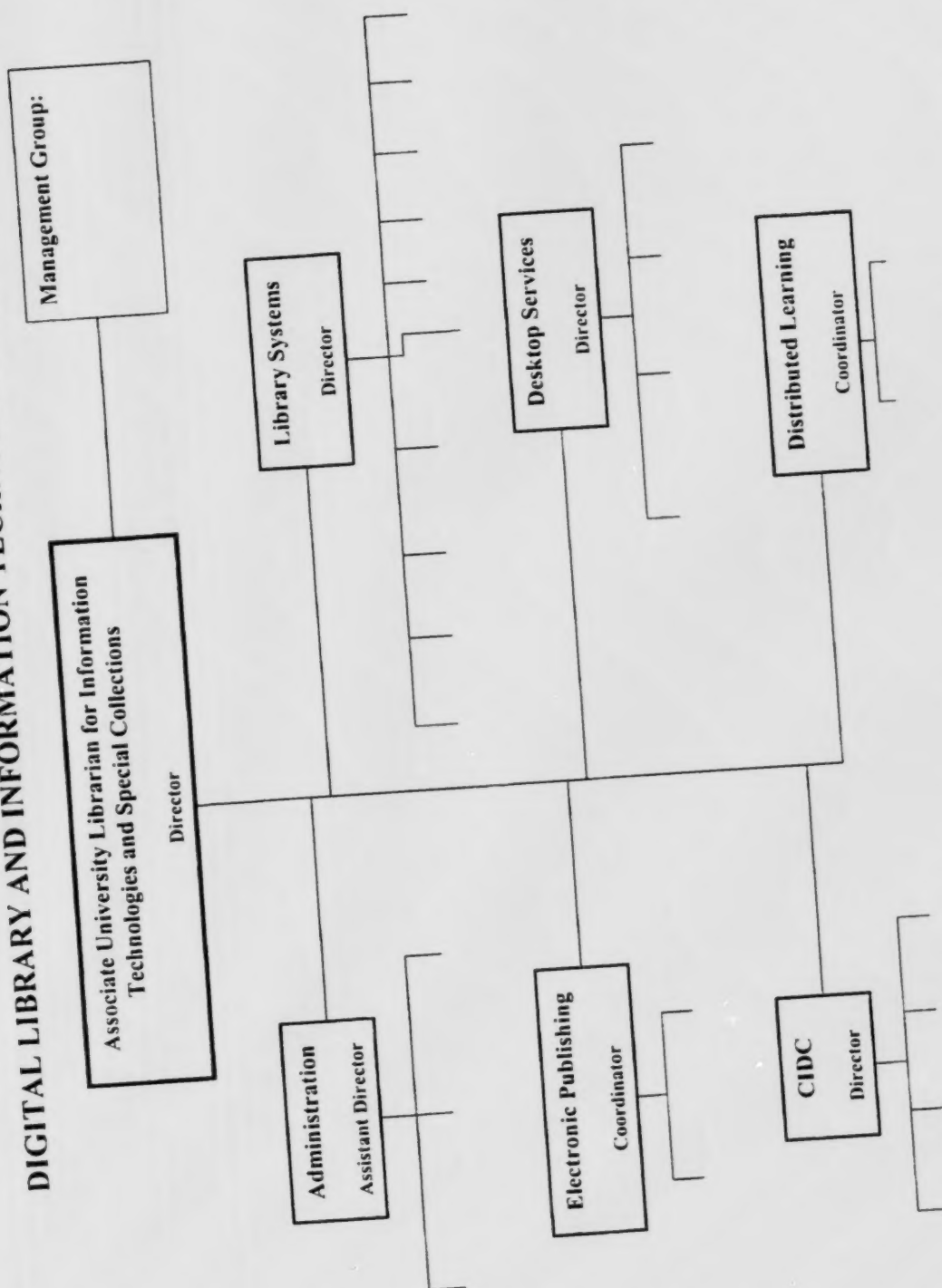
Organization Charts

LIS RESPONSIBILITY ORGANIZATION CHART





DIVISION OF DIGITAL LIBRARY AND INFORMATION TECHNOLOGIES (D-LIT)



Division of Digital Library and Information Technologies
Cornell University Library, Spring 2002

D-LIT Administration & Management Group: D-LIT has responsibility for planning, implementing, and providing technical support for information technology programs and network linkages throughout Cornell University Library, including the library management system, system integration and interface development, digital library initiatives, wireless and local area networks, electronic publishing, distributed learning library services, and desktop computing. D-LIT Administration and the D-LIT Management Group provide the leadership, direction, and support to meet these responsibilities and achieve the division's goals and mission.
<http://www.library.cornell.edu/dlit/>

Electronic Publishing: The centerpiece of this D-LIT unit is Project Euclid. Project Euclid's mission is to advance scholarly communication in the field of theoretical and applied mathematics and statistics. Project Euclid is designed to address the unique needs of low-cost independent and society journals. Through a collaborative partnership arrangement, these publishers will join forces and participate in an online presence with advanced functionality, without sacrificing their intellectual or economic independence or commitment to low subscription prices. Full-text searching, reference linking, interoperability through the Open Archives Initiative, and long-term retention of data are all important components of the project. The end result is a vibrant online information community for independent and society journals. This will assure that mathematics and statistics will continue to benefit from a healthy balance of commercial enterprises, scholarly societies, and independent publishers. <http://projecteuclid.org>

Distributed Learning: The mission of the Cornell University Library's Office of Distributed Learning is to improve and enhance the quality of learning by supporting the curriculum needs for faculty and students who participate in distributed learning. The Office assesses the impact of technology-mediated instruction on various library functions and facilitates the development of system-wide services. The coordinator of the Office serves as liaison between the Library and other Cornell distributed learning stakeholders, seeking out internal and external collaborations. One of the goals of the Office is to explore the role of the Library in collecting, managing, and preserving digital course materials. The main site and distributed learning tutorial can be found at <http://www.library.cornell.edu/DL/index.htm> and <http://www.library.cornell.edu/DL/tutorial/>, respectively.

Cornell Institute for Digital Collections: The Cornell Institute for Digital Collections (CIDC) was established on September 1, 1997. Its mission is to explore the use of emerging technologies to expand access to cultural and scientific sources and to support the use of these resources on campus and globally through the development and management of distinctive digital collections. This mission is being realized through academic, corporate, and public partnerships, national and international. In this critical area of educational and public concern, CIDC is contributing a unique combination of curatorial, instructional, research, and managerial expertise. CIDC is currently providing the direction in developing a new digitization service. Please visit our Web site at: <http://cidc.library.cornell.edu/>.

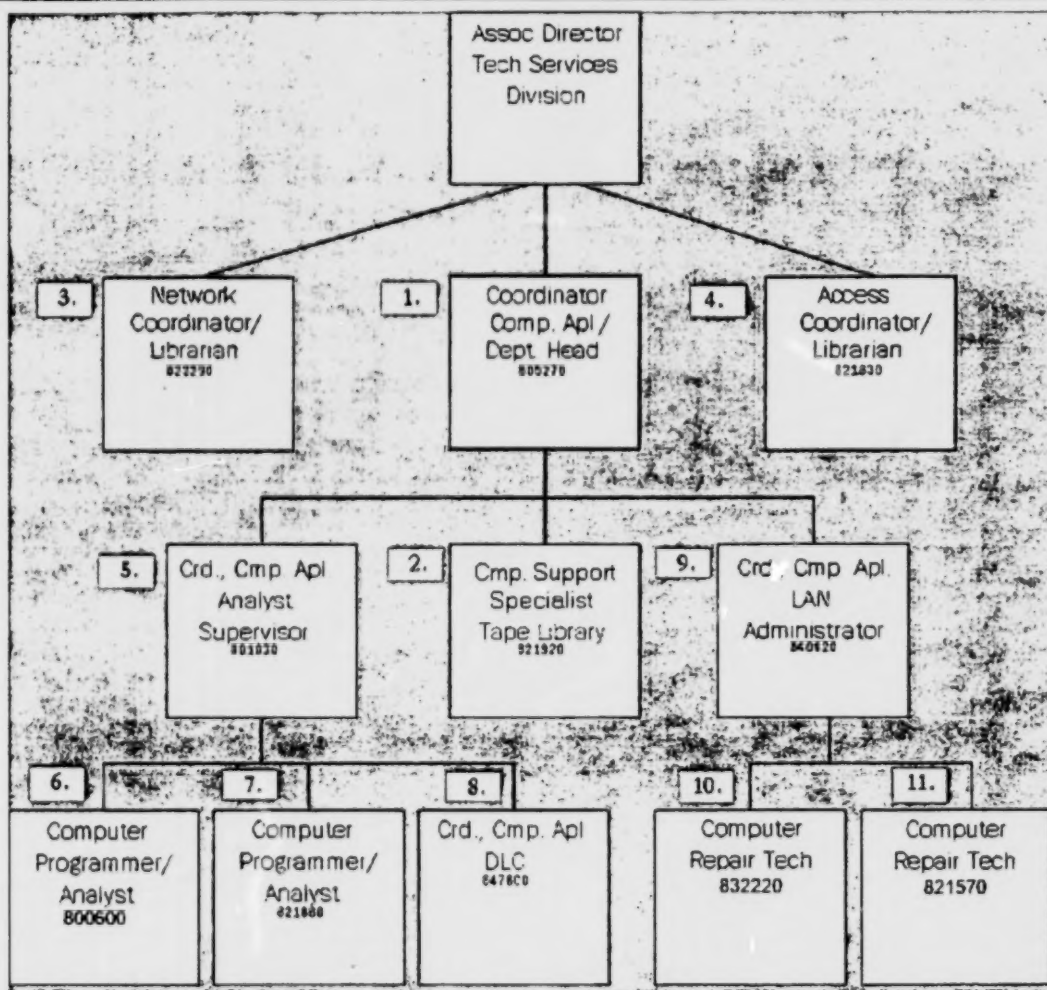
Desktop Services: Desktop Services provides centralized support to Cornell University Library's endowed Network Administrators through direct assistance and example, knowledge-transfer, referrals, planning, and counsel. Desktop Services participates in Library-wide Information Technology (IT) training, hardware, and software initiatives that impact desktop computing resources used by the staff and public. In coordination with departments and teams throughout the Library, we provide technical support for Endeavor's Voyager client software. We create installation packages of the Voyager clients, each containing Cornell-specific modifications. We then create instructions and employ various technologies to facilitate the distribution and installation of the software for use on staff computers. Working in partnership with your local Network Administrator, we are pleased to be of service to you and your department for all your desktop support issues. <http://www.library.cornell.edu/dlit/ds/>

Library Systems: Library Systems provides technical support for library servers, large databases, interfaces, and production aspects of the Cornell digital library. Systems supported by LS include the Voyager library management system, the library annex's inventory control system, the Making of America digital library, the Electronic Text Center's online full text databases, various citation databases, and the library web server. LS staff also administer the Physics Preprint arXiv; they designed and administer the system that controls project Euclid, described above, and have resurrected the Computer Science Technical Reports in a new incarnation, the CU Technical Reports. Several other digital library projects are in the planning stages. The SunRay systems in Olin's reference area are a joint project of the Library Systems and Desktop Services group. See <http://www.library.cornell.edu/dlit/systems.htm>.



Systems Department Organization Chart

Click on a box to find out more about what each person does.
(Hint: while all the links work, only a few of us have real pages so far...)



Click [here](#) to visit the Systems Alumni Page.

**UF Smathers Libraries Systems Dept
Position Duties**

Administration Unit

1. **Department Head** - chief Library technologist (network architecture, system security, IR strategy) and general management
2. **User Support Specialist** - user first aid and trouble ticket management; mainframe media care; minor server monitoring and maintenance

Automation Librarians

3. **Library-wide Network Applications** - Systems administrator for Library Web server, mail server, and domain name server; assists with general network administration
4. **Public Access Applications** - Coordinates public Web pages; creates Web interface elements for Web LUIS (library catalog); general liaison with FCLA

Software Unit

5. **Software Coordinator** - Chief Analyst; supervise programmers; create program specifications; program at highest level; database administrator
6. **Programmer/Analyst** - Original programming; support grants; Manage systems change process; interface Web and databases
7. **Programmer/Analyst** - Original programming; support grants; Manage systems change process; interface Web and databases
8. **Coordinator, Computer Applications** - First priority is support of Digital Library Center (DLC) software, especially user interfaces for accessing DLC databases. Workload permitting, also provides general Library support (like 6 & 7, above).

Hardware Unit

9. **Hardware/Network Coordinator** - Network Administrator; supervise technicians; introduce new technology; solve problems and configure network at highest level.
10. **Support Technician** - Network/computer tech; repair hardware; manage inventory; solve problems and reconfigure network; direct user support
11. **Support Technician** - Network/computer tech; repair hardware; manage inventory; solve problems and reconfigure network; direct user support

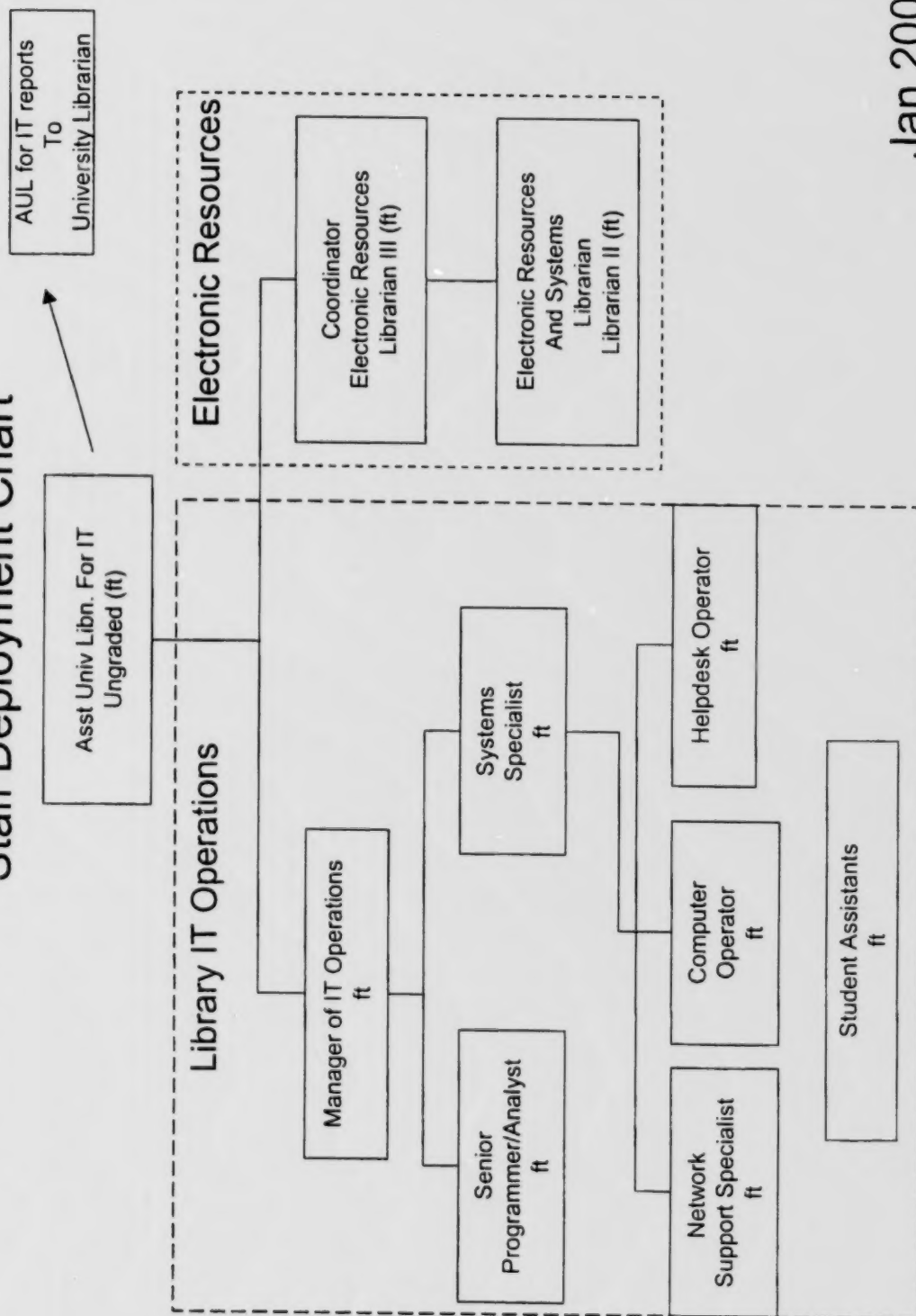
Plus:

~3 FTE of "Systems Liaisons": fractional assignments outside of department dedicated to computer support in cooperation with Systems Department

Back to the [Systems Homepage](#)

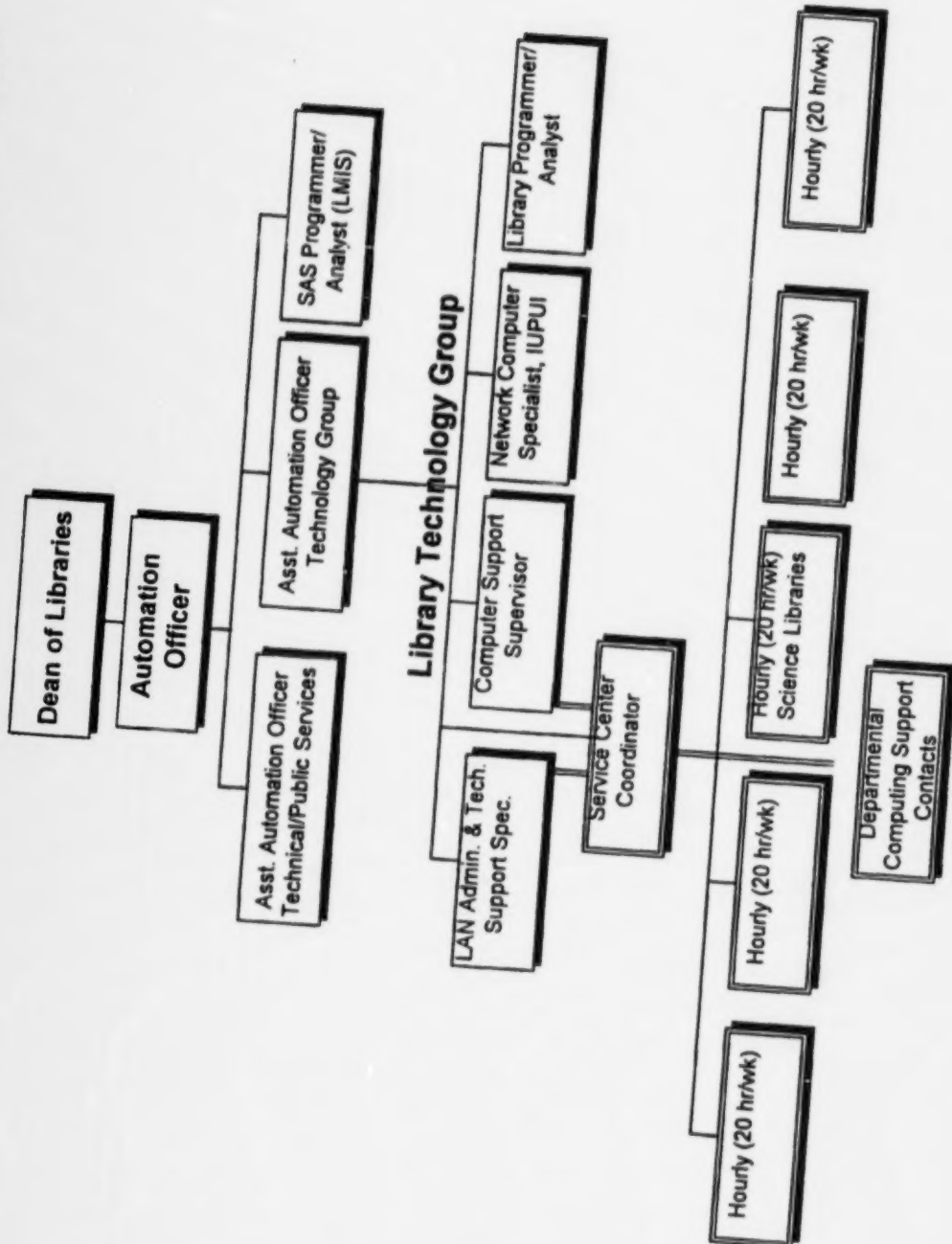
Last updated January 22, 2001
by [Debra Harris](#)
debharr@mail.uflib.ufl.edu

Gelman Library Information Technology Staff Deployment Chart

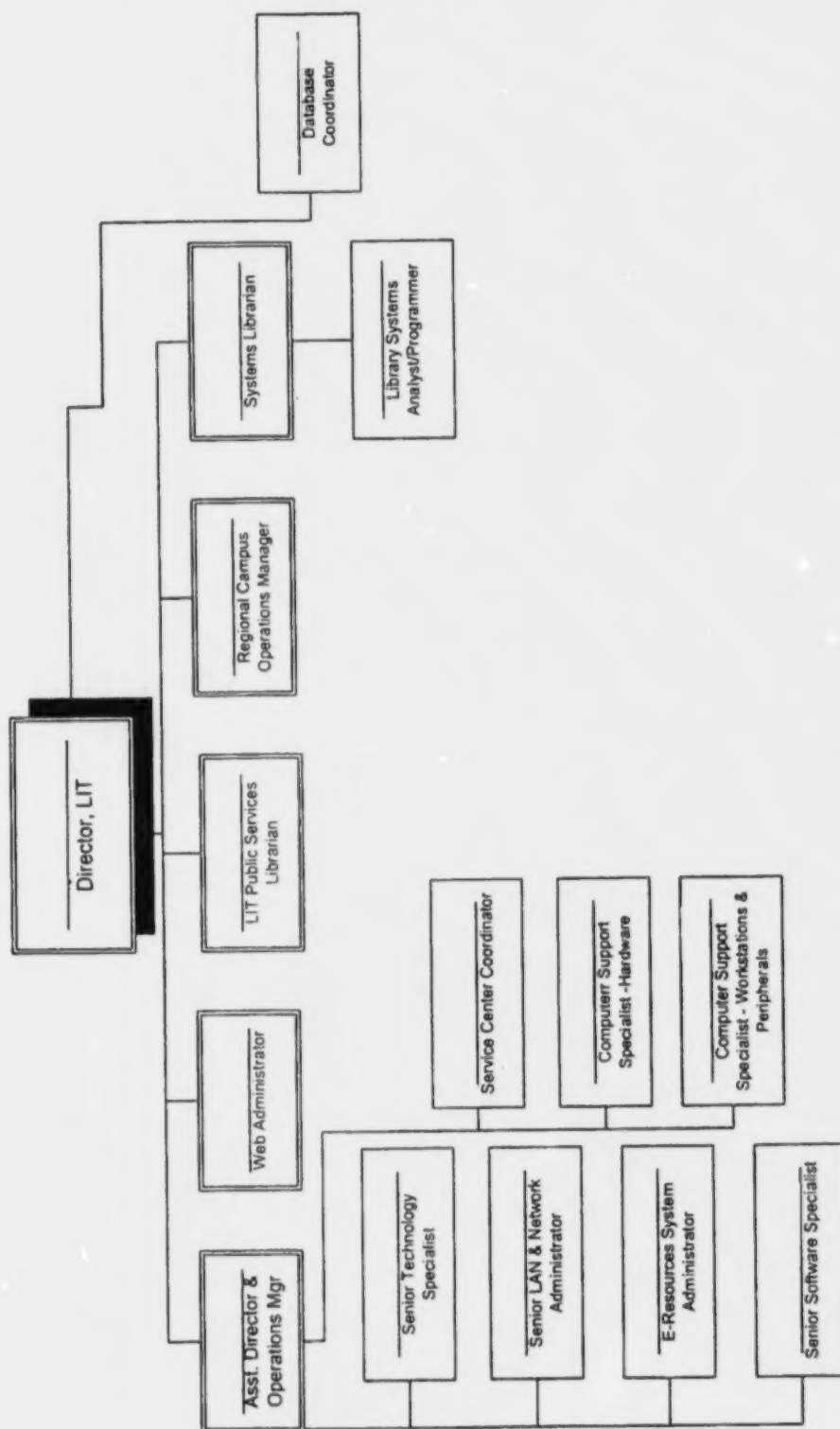


Jan 2002

Library Automation Office -- Technology Group Organization

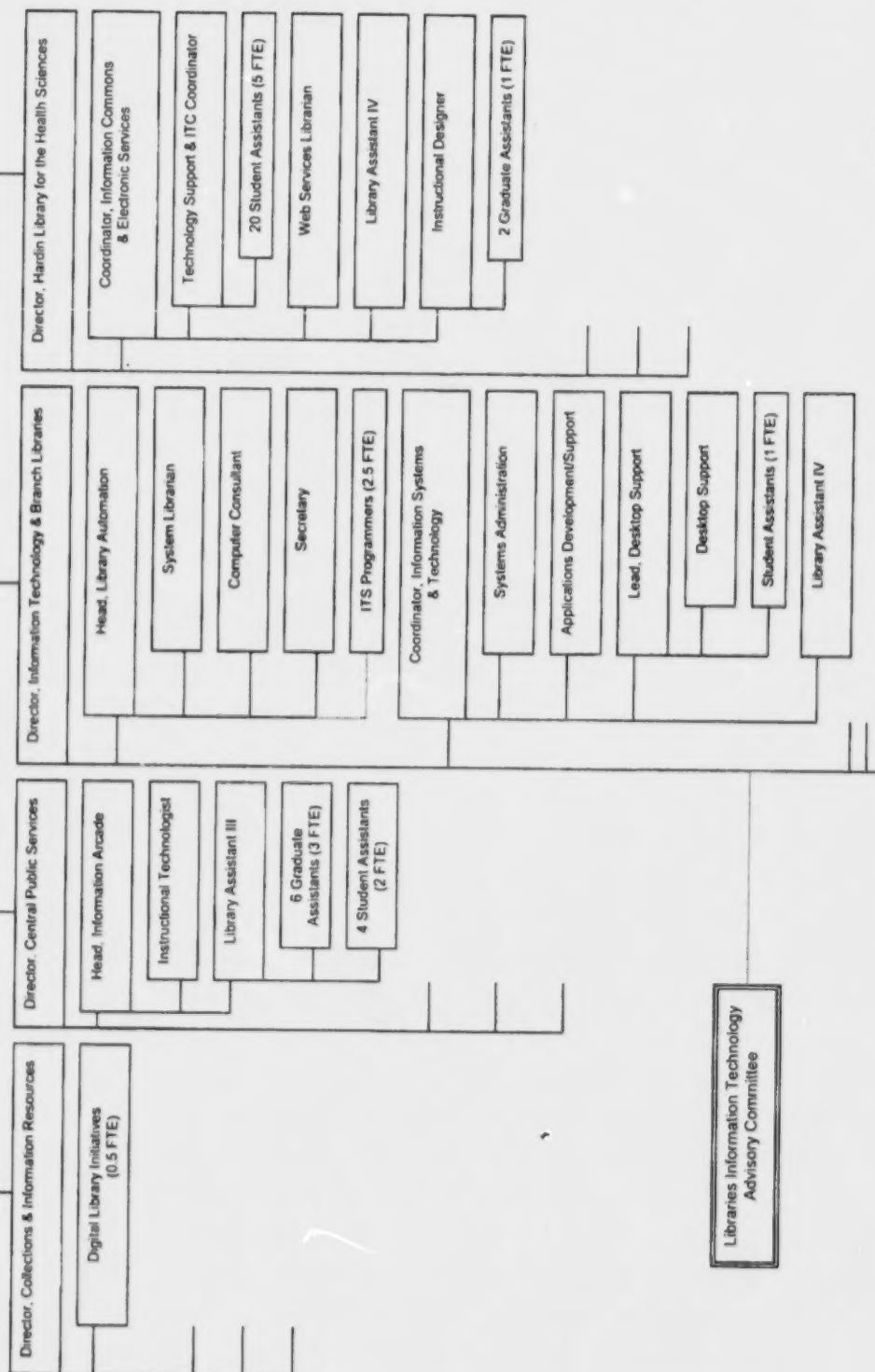


Library Information Technology



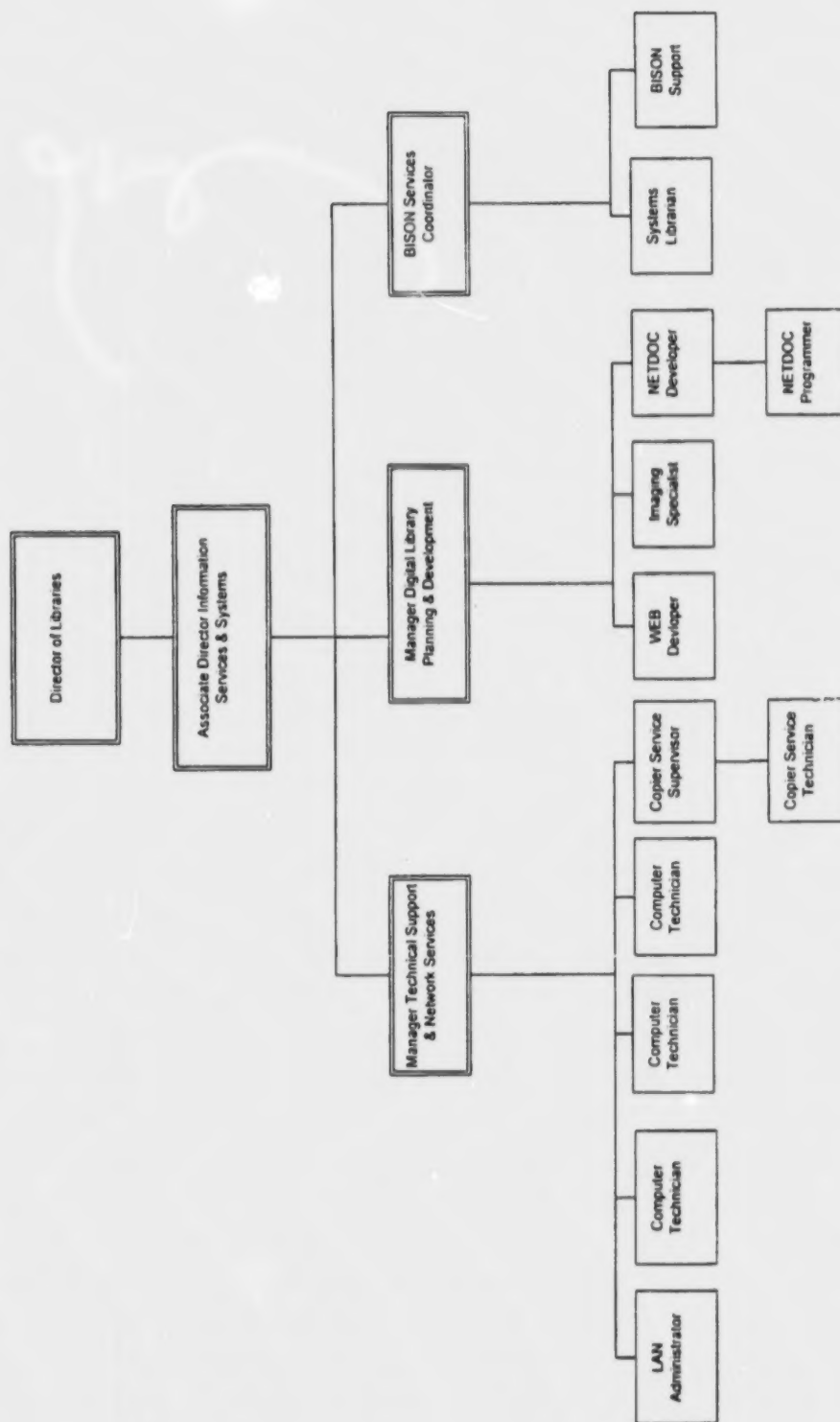
The University of Iowa Libraries
Information Technology

University Librarian

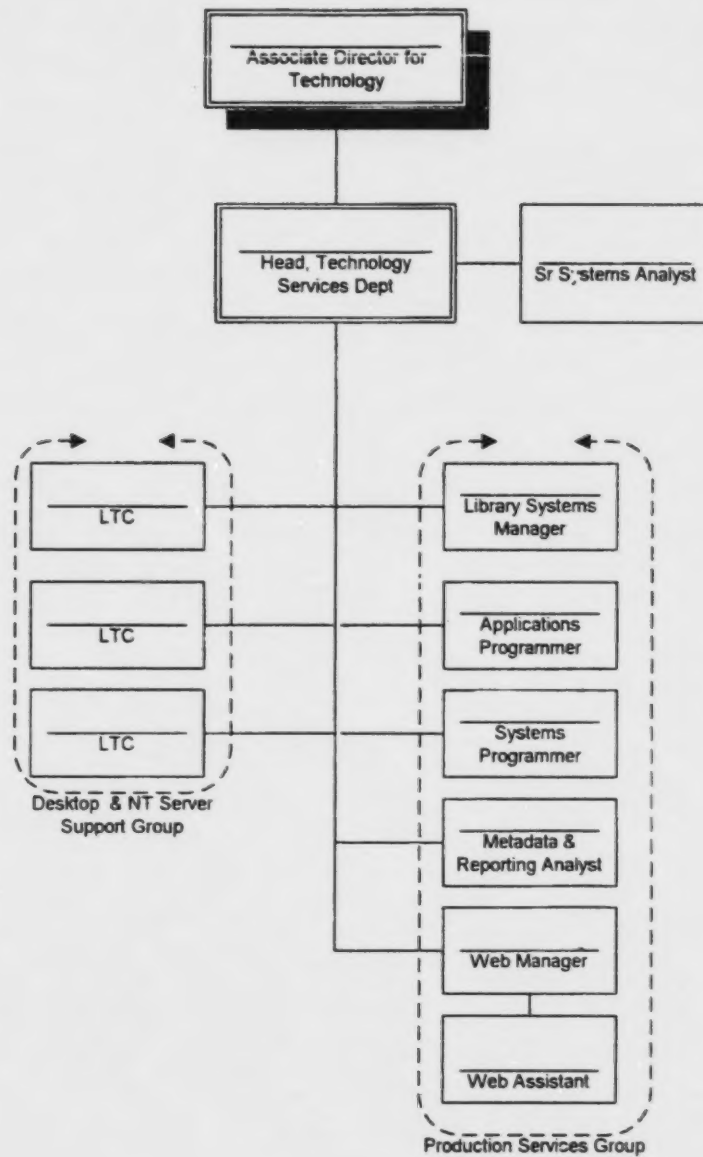


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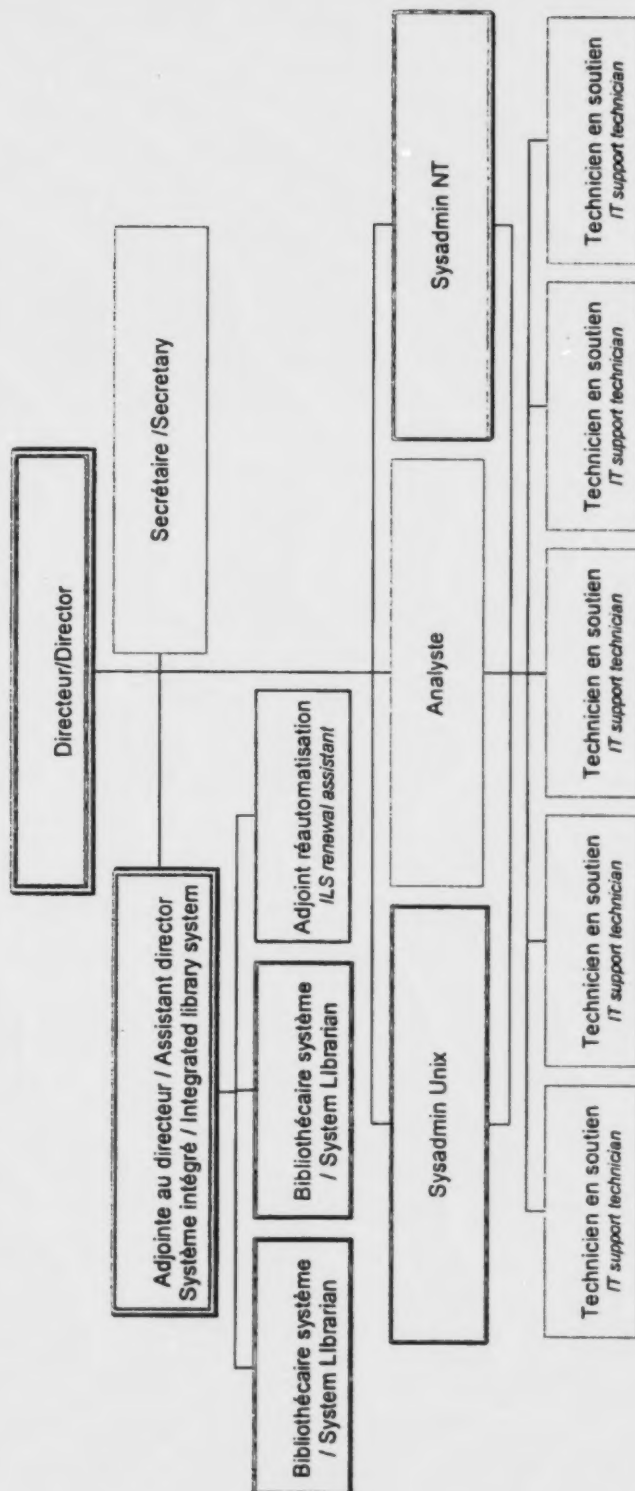
University of Manitoba
Libraries Electronic Technologies & Services (LETS) Organization Chart
July, 2002

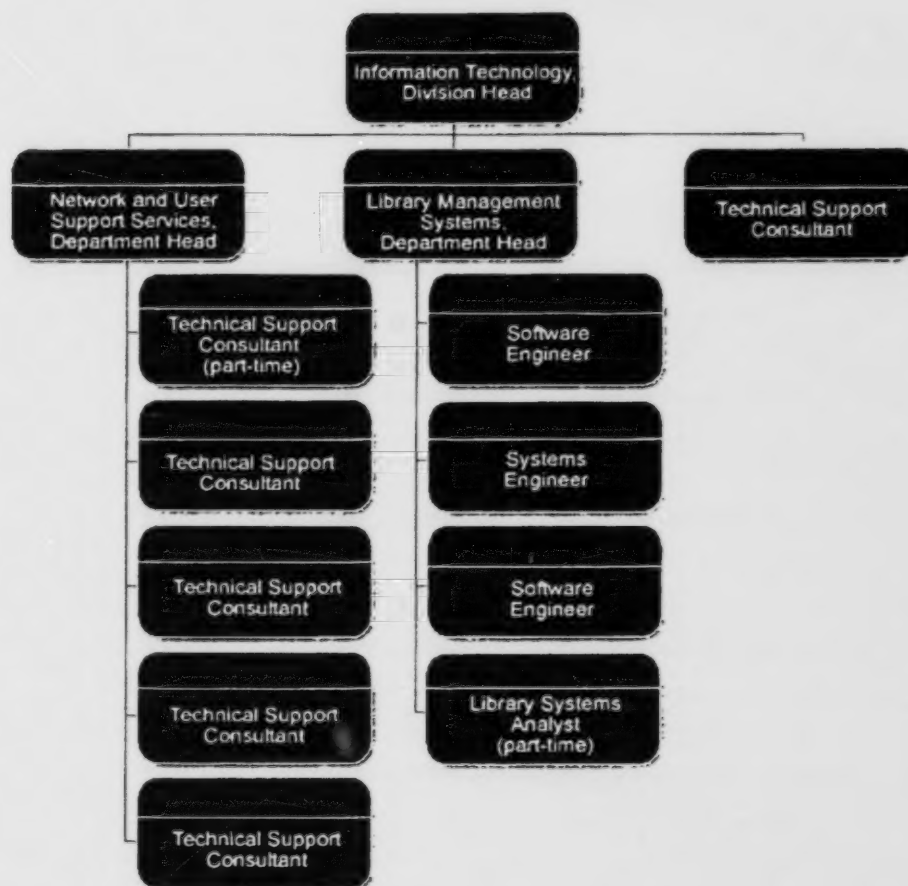


MIT Libraries Systems Office Organization
July, 2002



Bureau des systèmes / Systems Office -- Bibliothèques -- Université de Montréal



Information Technology**StaffWeb
Northwestern
University
Library****Organization Chart**

◀ Back

Information Technology

Last Modified: November 13, 2002

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Library committees and task forces | News and events | Library facilities |
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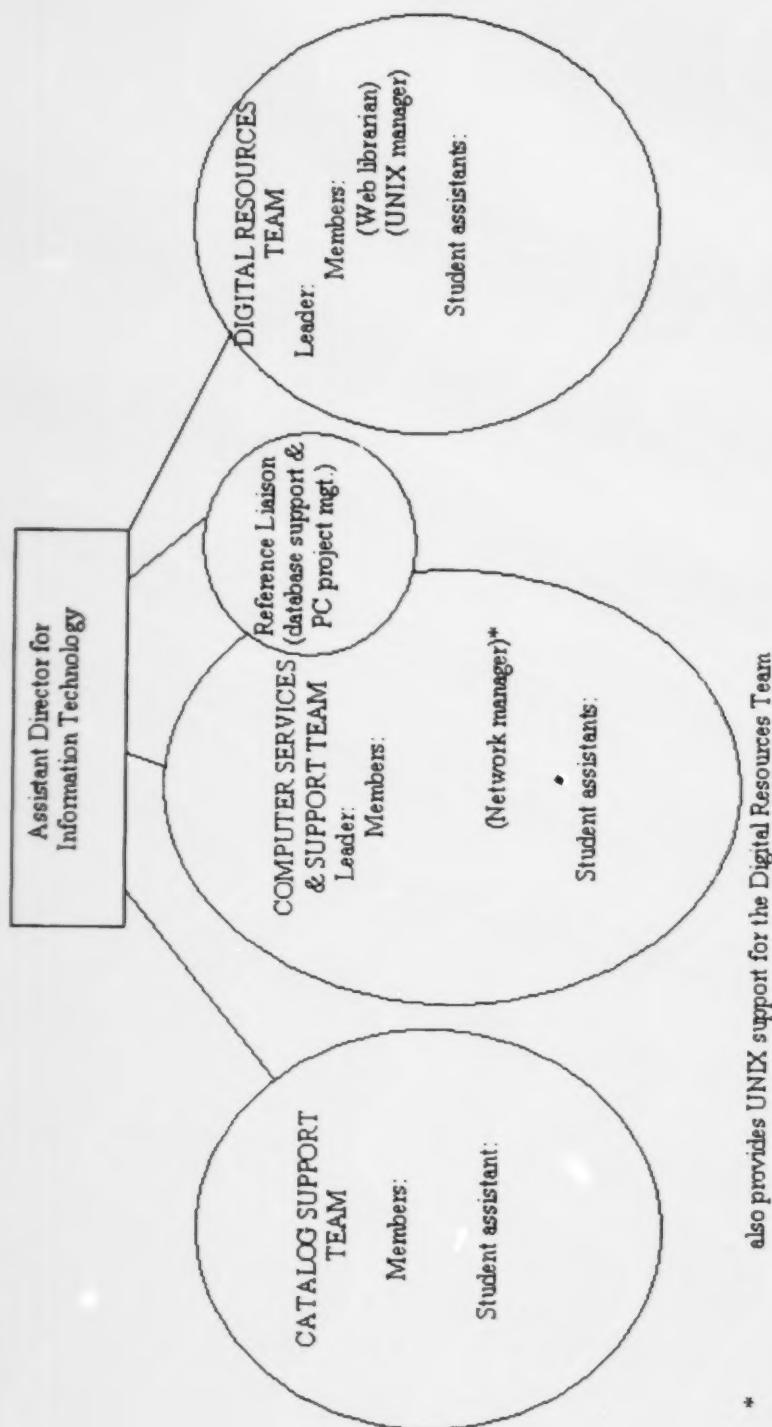
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Phone (847) 491-7658 Fax (847) 491-8306 E-mail: library@northwestern.edu

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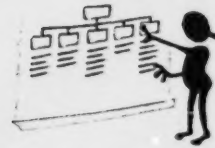
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OSU Libraries Information Technology Division





**Library Systems & Technology Department
Department Organization
July 17, 2002**



The Systems and Technology Department is responsible for the planning, implementation, maintenance, and support of all technology activities in the Temple University Libraries. The Department is organized with two complementary units – Enterprise Systems and Digital Technologies – along with one administrator to meet this mission.

Department Head
Intern

The Department Head provides leadership and management of the Library Systems and Technology Department for the Temple University Libraries. The Department Head also serves as site coordinator with Innovative Interfaces for maintenance of *Diamond*, the shared ILS, and chairs the inter-libraries Technology Steering Committee.

Systems and Technology Interns, hired on an “as-available” basis, participate in a variety of activities related to digital imaging and enterprise computing such as client/server technologies, documentation and training, image production, information storage and retrieval, networked databases, online user education, technology support, and web application development. May develop one major project in a specific area of interest as time and Libraries’ priorities permit.

Enterprise Systems Unit

The Library Enterprise Systems Unit holds primary responsibility for the Libraries’ computing infrastructure – desktop computers and peripherals, networked CDs, database access – including installation, support, and training. The Unit also provides administrative support for *Diamond*, the shared integrated library system of the Temple University Libraries, and is the primary line of support for work with Community Partners. Enterprise Systems handles the asset management activities of the University Libraries, and operates the Libraries’ internal help desk and intranet.

Positions

Systems Librarian & Unit Head

Manages activities of the Library Enterprise Systems Unit. Coordinates the University Libraries’ help desk and asset management activities including the development and maintenance of procedures, reports, and documentation. Develops and maintains training and intranet activities in provision of distributed computing support.

Systems Specialist, Library Integrated Systems

Provides staff support for and system maintenance of Integrated Library System (ILS) operations, including maintenance of backup schedule and development of adequate procedures for recovery. Assists Systems Librarian with development and maintenance of help desk procedures and documentation, help desk operation and service call tracking, and library staff training activities. Provides system-wide support – including installation, maintenance, upgrades – to staff in the use of computer hardware and desktop computer applications.

Systems Specialist, Public-Access Systems

Responsible for the University Libraries public access computing systems including Scholars Information Client computers, web catalog workstations, and network-attached CD servers. Performs installation, maintenance, and upgrades of computing hardware and software; develops and implements procedures and documentation for regular computer re-imaging, software updates, and system monitoring. Assists Systems Librarian with development and maintenance of help desk procedures and documentation, help desk operation and service call tracking, and library staff training activities.

Student Assistants (1.0 FTE)

Assist Systems & Technology staff with a variety of day-to-day activities supporting enterprise computing (e.g., help desk operation, software installation, hardware maintenance, system configuration, inventory) and digital technologies (e.g., scanning, web services, equipment maintenance). Advanced students may assist with network and server maintenance.

Digital Technologies Unit

The Library Digital Technologies Unit maintains the Libraries’ digital media projects and services – including image scanning, OCR, digital audio/video production, and media authoring – and supports all related equipment and software. The Unit is responsible for the University Libraries web presence, <http://www.library.temple.edu/>, and provides support and maintenance of library instructional technologies and web-delivered services including the *Diamond* WebPAC.

Positions

Webmaster/Digital Imaging Specialist

Responsibility for all aspects of the operation and maintenance of University Libraries' web presence. Provides expertise in processing, filming, quality control, project management, process engineering, graphic arts, and trouble-shooting in digital imaging.

Systems Specialist, Visual and Instructional Technology

Develops and implements imaging systems, installs software updates, installs and maintains digital imaging and peripheral computing hardware in support of University Libraries' digital initiatives and user education program. Coordinates inter-departmental movement of scanning and imaging equipment; maintains user education classroom computing and projection equipment. Assists Webmaster/Digital Imaging Specialist with development and maintenance of library web services, web catalog, and digital imaging/video projects including procedures and documentation; performs media authoring in support of these activities. Works with Enterprise Systems Unit personnel providing system-wide support for the Libraries' computing infrastructure.

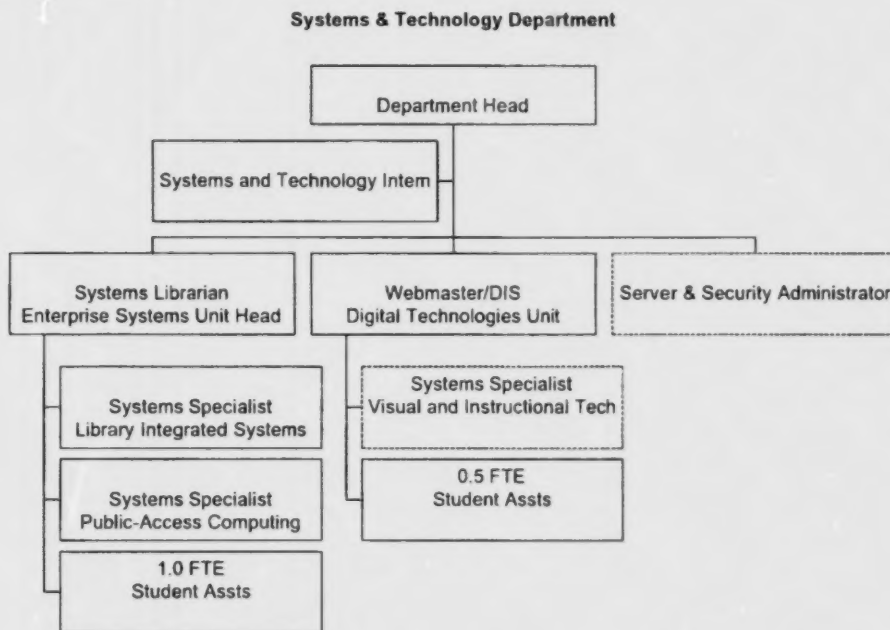
Student Assistants (0.5 FTE)

Same as Enterprise Systems student assistants.

Server and Security Administrator

Manages all aspects of Library servers running Tru64 UNIX, Windows NT Server, and Linux including user access, security, and back-up. Monitors server performance and capacity; tunes, updates, and recommends upgrades as needed. Checks for security holes, intrusions, and other security risks. Provides periodic and ad hoc reports of anomalies and hack attempts. Performs ongoing log scanning. Installs and maintains library server-based applications. Assists Department Head in development of overall data security strategies in accord with University policy and standards. Works with Enterprise Systems and Digital Technologies Units to develop and implement secure systems, data standards, and databases for library projects. Participates in staff training and Departmental development activities and assists with the ongoing support of Library computing infrastructure as required.

Department Organization Chart



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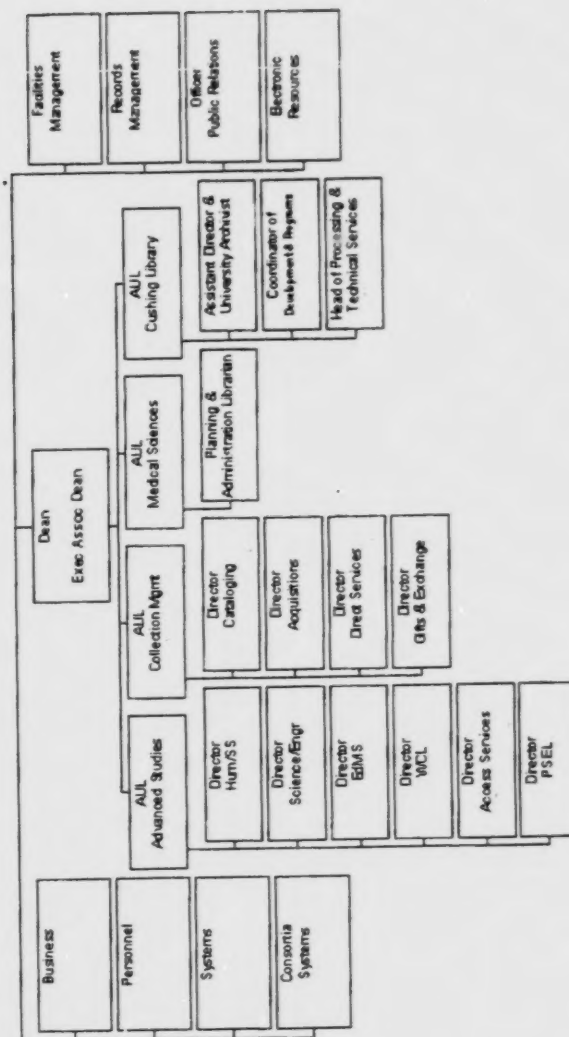
LIBRARY ADMINISTRATION

Mission Office Information Organization Chart About the Dean

Organization Chart

October 31, 2001

Texas A&M Libraries Organizational Chart



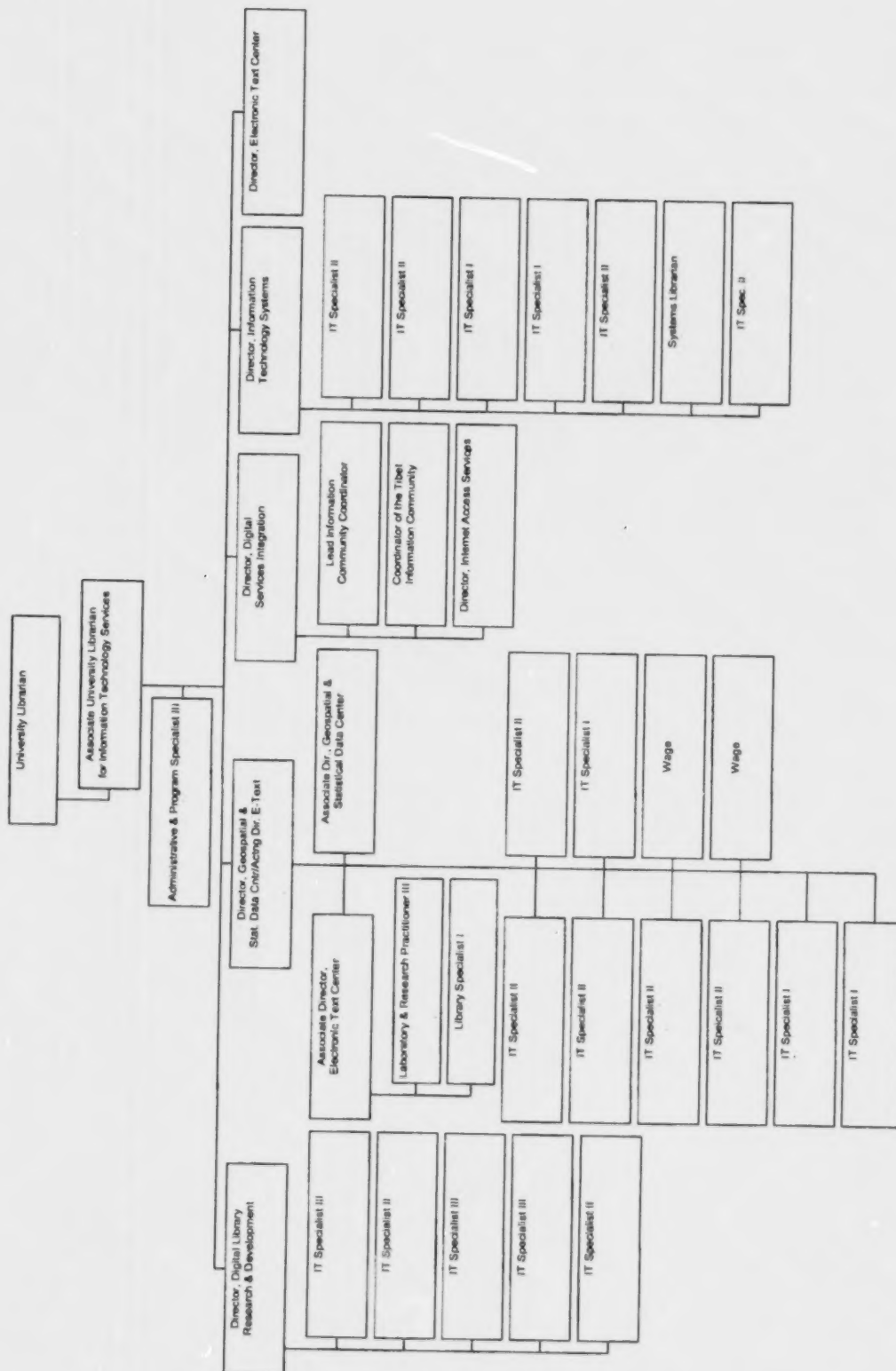
Updated August 1, 2002

http://library.tamu.edu/admin/admin_pg/orgchart.htm

INFORMATION TECHNOLOGY SYSTEMS

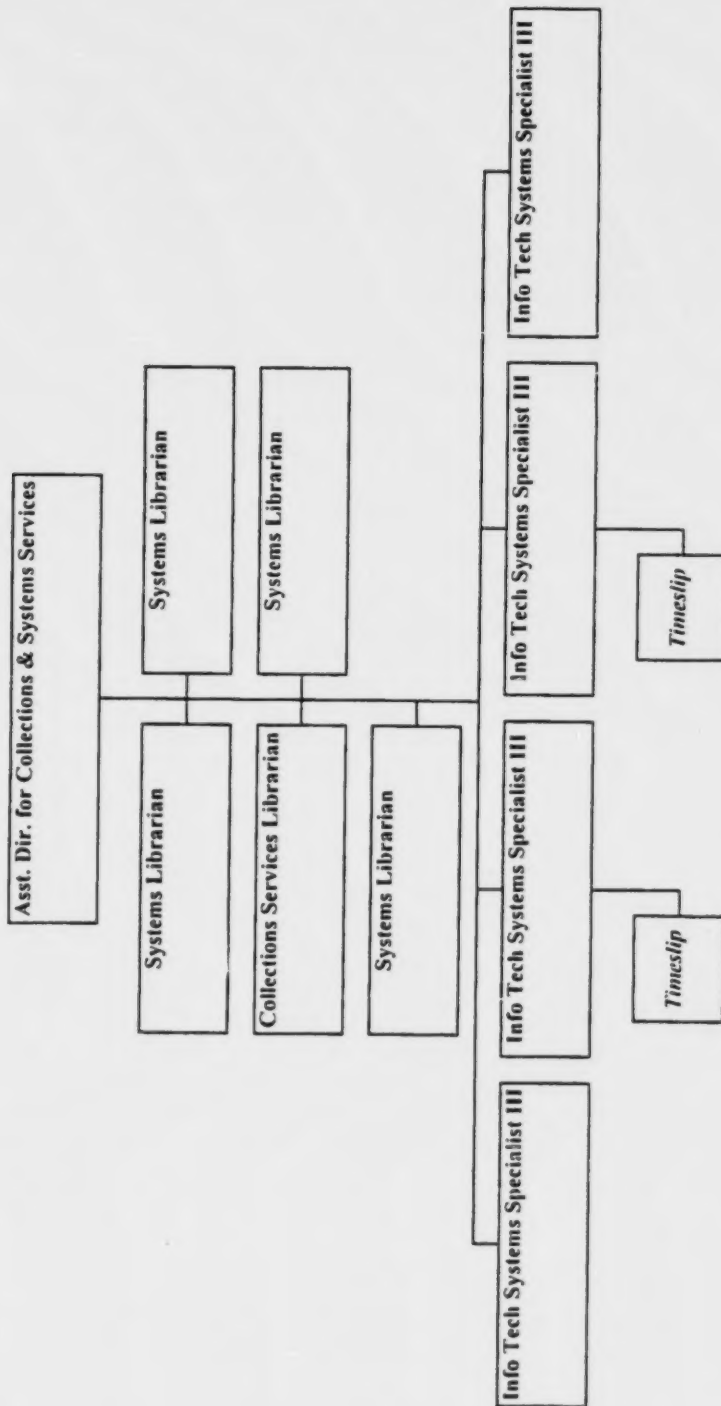
Last Updated: 09/18/02

*Position C0857 is jointly reporting to ITC

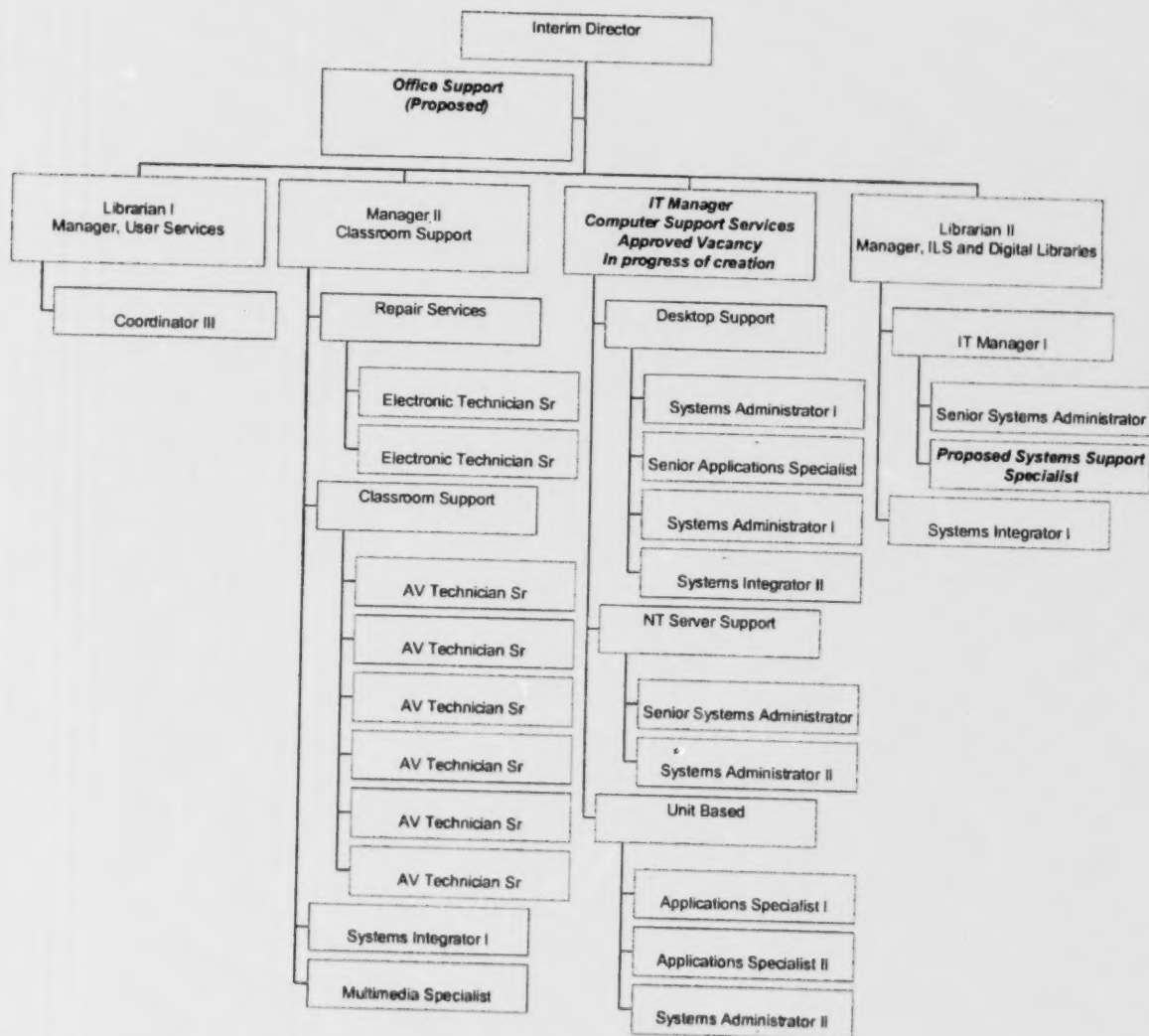


COLLECTIONS & SYSTEMS SERVICES

January 2002



LCMS Organization Chart



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SPEC Kit 271

Library Systems Office Organization

Mission Statements

Home Annual Return

UH Systems Department Annual Report FY 2001

Introduction

Departmental Mission

The Systems department provides technology support and services to its primary clientele, the staff of the University of Hawaii libraries which is comprised of 10 campuses and 5 education centers on 6 islands as well as the Bishop Museum, the Hawaii Medical Library, and the Hawaii State Archives. In doing so we serve the public by creating, preserving, and transmitting knowledge in a multicultural environment. The Systems department maintains and enhances the effectiveness and efficiency of the Library Management and Information System (LMIS) and other related library processes in the area of digital resources support. Systems is committed to excellence and is dedicated to connecting people with technology.



Strategic Plan - Relationship to Division and UH - Resources Used - Outcomes Achieved - Other Activities - Goals FY 2002

Systems Department +1 (808)956-7853; and by e-Delivery to assist@hawaii.edu.

Systems Department - Hamilton Library - University of Hawaii
2550 McCarthy Mall • Honolulu, Hawaii 96822-2233 USA

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UNIVERSITY OF HAWAII AT MANOA

LIBRARIES

Library Home Search This Site

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e-mail address:
micro@hawaii.edu

Desktop Network Services (DNS)

What's New!

Wireless installs in Hamilton Library!

Department fully staffed with three IT Specialists!

Over 480 microcomputers in use by staff and public!

About Us

Desktop Network Services (DNS) serves the staff of the University of Hawai'i at Manoa Library by maintaining the Library's networks, networking equipment, print and file servers and all desktop computing resources. DNS staff provide hardware, software, network, training, consultation and development research support and services and manage the Library's World Wide Web home pages.

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Last revised on Oct 23 19:07:18 2002

You are visitor number 151 since August 1, 2002

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Indiana University Bloomington Libraries

Library Information Technology

About Library Information Technology

LIT provides technology support for most libraries in the Indiana University system. Our services link library patrons and staff to over 19,000 databases and electronic journals plus provide infrastructure for all library electronic administrative needs.

- The Bloomington office has system-wide responsibilities in addition to providing support to the almost 40 Bloomington campus libraries and administrative departments.
- The Indianapolis office provides support to the Indianapolis and regional campus libraries.
- The UITS Library Information Systems team provides support and development for IU's Unicorn library management system.
- Where assigned, Computer Support Assistants (CSAs) provide first response for all needs in their area, and LIT personnel respond when the CSA is absent or for system wide concerns.

Contacting Library Information Technology

How to reach LIT via email or phone

Who We Are

LIT personnel (Note: For trouble calls, use the central number to allow best response rather than call individual LIT professionals.)

Computer Support Assistants (CSAs)

Technology support in specific Bloomington libraries and units. (If a CSA is assigned to your area, contact that person to allow them the chance to address your concerns before contacting LIT)

URL: <http://www.indiana.edu/~libauto/about.html>

Last updated: 12 July 2001

Comments: libauto@indiana.edu

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[IU B Libraries](#)

[IUCA/Databases](#)

[IUB home](#)

[LIT Home](#)

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[LIT Site Map](#)

[LIT Knowledge Base](#)

Temple University Libraries

Systems and Technology Department

Main Campus
 Paley Library
 Room 111 Library Enterprise Systems Unit
 Room 112 Head of Systems & Technology
 Room 006 Library Digital Technologies Unit

The Systems and Technology Department is responsible for the planning, implementation, maintenance, and support of all technology activities in the Temple University Libraries. The Department is organized into two complementary units to meet this mission: Enterprise Systems, responsible for the computing infrastructure and integrated library system; and Digital Technologies, maintaining the Libraries' digital media projects.

Enterprise Systems

The Library Enterprise Systems Unit holds primary responsibility for the Libraries' computing infrastructure - desktop computers and peripherals, networked CDs, database access - including installation, support, and training. The Unit also provides administrative support for Diamond, the shared integrated library system of the Temple University Libraries. Enterprise Systems handles the asset management activities of the University Libraries, and operates the Libraries' internal Help Desk and Intranet.

Digital Technologies

The Library Digital Technologies Unit carries out the Libraries' digital media projects including image scanning, OCR, and digital photography, and supports all related equipment and software. The Unit is responsible for the University Libraries' web presence, <http://www.library.temple.edu>, and other web-delivered services including the Diamond WebOPAC.

Library Systems And Technology Help Desk (Staff Only)

This Document Was Last Modified On: October 14, 2002

[Library Homepage](#)

[Temple Homepage](#)

Systems Mission & Ideology Statement

The Systems Team serves the Libraries' Mission and Strategic Plans in the area of Information Technology. We research, develop, implement, and maintain systems as part of a distributed, collaborative effort.

- Develop and maintain the common Information Technology infrastructure in the Libraries.
- Provide experts and consultants for technology research and development
- Serve as the focal point for implementation of technology
- Facilitate and expedite access to information resources
- Take a leadership role in the development of systems and technology-based services
- Enable the Libraries strategic plans through the use of technology
- Foster Libraries-wide collaboration in the use of technology
- Maintain primary responsibility for those things that are best done in a centralized way. Factors that imply a need for centralization include:
 - Specialized expertise required
 - Library-wide needs (e.g. networks)
 - The need to avoid expensive and inefficient duplication of effort
 - Security concerns
- Promote decentralization of those tasks that are more efficiently done by individual units; offer support and training for these decentralized activities

Systems Ideology:

- We are in the customer satisfaction business; we work towards real-world success--the end result must be something that works and is useful for our "customers"
- Communication is vital--both within Systems and with other Teams; always inform those who will be impacted by your actions
- We collaborate and share our expertise freely, both within the Team and with other Teams
- We take responsibility for our own work
- Honest mistakes are always ok; prudent risks are ok
- Self-empowerment is ok as long as it is in support of the Library and Team's mission (empowered does not equal maverick)
- Participation in the Team's management is expected; questioning and challenging is an acceptable part of this participation

6/98

Texas A&M University Libraries - Library Systems Office

[Library Help Desk](#)
[IT Resources](#)
[Contact Information](#)

Mission Statement:

Meet the information systems and technology needs of the TAMU Libraries by managing resources in a manner consistent with our organization's overall mission of service to the University community.

Evans
Library

West Campus
Library

Cushing
Library

Policy Sciences &
Economics Library

Medical Sciences
Library

Bush
Library

Texas A&M
University

WAYNE STATE UNIVERSITY LIBRARY SYSTEM

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[Dean's Office](#)

[Library &
Information
Science Program](#)

[Library Computing
& Media Services](#)

[Technical Services
& Systems](#)

[UGE 1000](#)

[University Press](#)

[DALNET](#)

Library Computing and Media Services

122 Purdy-Kresge Library
5205 Cass Avenue
Detroit, MI USA 48202
•t(313)577-1480 • f(313)577-6777 (fax)

Our Mission:

At LCMS, we support the instructional, research, and learning processes at Wayne State University through the provision of leadership in library and classroom technology selection, acquisition, implementation, training and maintenance. Our primary focus is to provide the highest quality service to students, faculty and staff in an effective and proactive environment.

LCMS is composed of the following units:

- Media Services
- Computer Support Team
- Digital Library Services
- Help Desk Services

[View our organizational chart here](#)

Media Services

Media Services strives to support teaching and learning at Wayne State University by providing the highest quality technical assistance, consultative advice and customer service in areas such as Multimedia Audiovisual Equipment Support, Audio & Video taping services, Graphic Design, Teleconference Scheduling and Electronic and Audiovisual Equipment Repair.

You can order Audiovisual Equipment On-line! Click here to fill out the Order Form. If you encounter problems or have some suggestions then let us know.

Computer Support Team (CST)

The CST's mission is to provide technical support to the faculty and staff of the Wayne State University Library System. CST members are assigned to different parts of the Library System, and also maintain a telephone help desk. If you are a WSULS staff member, you can call the Help Desk during normal business hours to ask questions or report problems; the number is (313) 577-1154. For more information on the CST's Help Desk and the hours of operation, click here. CST can also be reached by fax at (313)-577-6777.

Digital Library Services

As an integral part of its services and collections, the WSULS Libraries are developing a comprehensive digital library program. We are in a period of flux as standards, technology, and best practices are evolving. Our Mission Statement describes our program in broad terms. Creating, managing, and providing access to digital content is a regular component of our services and collections. We also have several project-based initiatives under way in order to explore emerging digital technologies.

Help Desk Services

The lcms help desk provides general purpose computing support for users of the Undergraduate Library.

Tuesday, 19 November

SPEC Kit 271

Library Systems Office Organization

Position Descriptions

University Libraries
Professional Performance Program

12/18/2001 - 12/17/2002

Lead Programmer/Analyst - SL-4

(Campus Title: ADVANCE Programmer/Analyst)

I. OBJECTIVES

A. Ensures that the Geac ADVANCE system is working properly, and that downtime is minimized.

B. Ensure that services on libgoph.albany.edu, including ICPSR files and ADVANCEWeb, are working properly and that downtime is minimized.

C. Work on projects according to their priority and complete them on time.

D. Work as an integral part of the Library Systems team through constant communication, regular cross-training, and ongoing assessment of services and goals.

II. DUTIES AND RESPONSIBILITIES

A. System Operation (20%)

1. Coordinate the daily operation of the Geac ADVANCE system with appropriate Unix Support Group (USG) and Operations staff.

2. Oversee the daily production of ADVANCE reports and notices.

3. Carry out procedures necessary to load data from external sources and to export data to other systems for ADVANCE.

4. Initiate whatever actions are necessary to ensure the integrity of computer files and uninterrupted operation of the Geac ADVANCE system.

5. Share night and weekend on-call responsibilities with the Head of Library Systems, the Microcomputer and Network Applications Programmer/Analyst, and the Windows NT Networking Programmer/Analyst.

6. Serve as the primary Library Systems contact for services on libgoph.albany.edu including ICPSR files, ADVANCEWeb, WebSPIRS, and the Proxy Server.

B. Systems Development (30%)

1. Analyze, design, test, implement, maintain, and document programs and procedures for the Libraries' ADVANCE system using Unix, uniVerse, and BASIC.

2. Prepare documentation for ADVANCE system procedures.

3. Analyze problems, general needs, and new opportunities related to ADVANCE; consider alternatives, develop specifications and plans, and help lead projects to successful conclusions.

4. Advise library staff and administrators on the safe and healthful use of computing equipment and terminals.

C. System Maintenance (40%)

1. Analyze and document ADVANCE system problems.

2. Serve as the primary contact person with the Geac Library Assistance Desk and for following up on ADVANCE system problems.

3. Serve as the primary contact person with the Unix Support Group (USG) and Operations for reporting and following up on Geac ADVANCE problems, and also ICPSR and ADVANCEWeb services on libgoph.albany.edu.

4. Communicate directly with library staff regarding ADVANCE system capabilities and changes and to answer questions.

5. Assist unit and department heads and assistant directors in providing training in the use of the Geac ADVANCE system for their staffs.

6. Serve as backup to the other Library Systems programmer/analysts in their absences for routine operational

procedures such as re-booting and backing up servers.

7. Ensure, in consultation with appropriate USG and Operations staff, that essential data files are copied and stored in a remote, secure site on a regular basis for ADVANCE and libgoph.albany.edu. Keep records of tape and other external data files that are imported or exported to/from the ADVANCE system. Monitor FAST (file-optimization) reports and arrange for file re-organization as needed and at least every six months.

8. Develop reporting forms and ensure that appropriate system documentation is maintained including vendor-provided documentation, log of reported problems, log of system changes, and log of operational tasks completed.

9. Schedule regular cleaning of the computer room and equipment.

10. Apply updates to the Circulation patron database daily from SUNYCard, and weekly from SIRS (student information from Registrar's office), HRMS (faculty/staff information from Human Resources), and Academic Computing (student email addresses).

11. Serve on the Circulation Appeals Committee as the Library Systems resource for extracting information from ADVANCE circulation and fine records relating to appeals.

D. Unit Supervision (10%)

1. Directly supervise student operations assistants who work on ADVANCE, and assist in the supervision of other student assistants. In the absence of the departmental secretary, ensure that student timesheets are submitted on time.

2. Assist the Head of Library Systems in planning, budgeting, and other administrative assignments.

3. Handle administrative responsibilities in the absence of the Head of Library Systems.

E. University Service

Serve on Library and campus committees as appropriate and as time permits.

F. Mastery of Specialization

1. Demonstrate technical competence on the Geac ADVANCE system including the ability to use Unix, uniVerse, and BASIC. Demonstrate technical competence on microcomputers using Windows, QVTterm, Word, Excel, Access, Netscape, and Eudora.

2. Maintain a working understanding of the Geac ADVANCE database structure and programs, and how they relate to specific library operations and policies.

3. Develop a working understanding of HTML. Learn basic programming in Perl and Java to support email circulation notices (Perl) and the next version of ADVANCEWeb (Java-based).

4. Develop a working understanding of Z39.50 and related client software (e.g. ADVANCEWeb).

5. Learn about SQL databases and use SQL commands in Access database development in preparation for migration to ExLibris.

6. Keep abreast of developments in library automation and computer technology, especially those related to library management systems (e.g. ADVANCE, ExLibris) through reading, continuing education, and personal contacts.

7. Keep abreast of news relating to health and safety of computer and terminal equipment use including VDT emissions and ergonomics.

8. Demonstrate continuing professional growth in areas relating to library and computer systems development.

G. Functional Relationships

1. Reports to the Head of Library Systems.

2. Supervises student operations assistants.

3. Contributes to an atmosphere that encourages effective interpersonal cooperation and communication in Library Systems, the Technical Services and Systems Division, and other units in the Libraries.

IV. Evaluative Criteria

Is supervised and evaluated by the Head of Library Systems based upon the objectives, duties, and responsibilities described above.

Interacts effectively and in a professional manner with peers; contributes to interpersonal and working relationships of trust and respect; contributes positively to individual and group interactions and problem-solving; is willing to provide professional support and assistance to peers and managers consistent with primary job duties.

Vicki Dillon
Lead Programmer/Analyst (SL-4)

Date

Roger D. Gifford
Head, Library Systems Development

Date

Heather S. Miller
Asst. Director, Technical Services and Systems

Date

(c:\roger\perfvjd2001.doc)

UH Information Technology Specialist

Systems

INTRODUCTION

Professional administrative, managerial, and technical work with ultimate responsibility for the management of the University of Hawai'i Libraries computer facility is required of the person filling this position.

This position is responsible for providing assistance to the Head of the Systems Department, a Librarian Faculty position, in the overall technical needs of automated library systems development and operation of a multi-million dollar computer facility. The facility houses databases and provides Help Desk support and data-communications support for the UH System Libraries which include: UH Hilo, UH West-Oahu, Hawai'i Community College (CC), Honolulu CC, Kapiolani CC, Kauai CC, Leeward CC, Maui CC, and Windward CC. The facility also houses databases and provides help desk support and data-communications support for the Bishop Museum, and the Hawai'i Medical Library.

The Library Systems Department is charged with:

1. maintaining a Tandem non-stop K1000 server and accompanying peripherals;
2. maintaining and administering a Sun Sparc server;
3. maintaining and administering all climate and environmental equipment located within the computer facility;
4. maintaining and administering a fire suppression system located within the computer facility;
5. assisting in the management of a centralized data-communications system including database maintenance, usage monitoring, and the day-to-day operation of a private access computer exchange, for the all networked libraries.

The Library's computer facility runs at present a Tandem non-stop K1000 server. At this time, the system houses approximately 2.5 million bibliographic records.

The Systems department is responsible for providing the necessary support for all of the integrated library management system (ILMS) activities of the network of libraries listed above. In order to fulfill this responsibility, unlike most other state offices, its system must be accessible 7 days a week, twenty four hours a day, including holidays.

The computer specialist position is directly responsible for ensuring that the UH Libraries computer facility is operational on a 24-hour a day basis. The incumbent must perform with wide latitude for independent judgment and initiative. This position conducts computer operations training and supervision of other Systems staff and student employees. Also, as the

computer manager of the UH Libraries interactive online public catalog, must be available on call to address trouble conditions at all times.

In administering the UH Libraries ILMS computer system, this position directly supervises the work of two UH Computer Specialist II positions (system level programmers and operational duties). This position schedules, coordinates, integrates and reviews the work of two positions who have shift computer operation duties in addition to their own highly specialized project foci requiring additional computer expertise such as library database management and development, software engineering and development and client/server integration. This position also provides consultation and technical advice to librarians within the network of libraries.

DUTIES AND RESPONSIBILITIES

A. UH Library Computer Facility Operations Management

45%

Project manager for coordinating, reviewing and integrating the work of the computer specialists charged with operating and managing the integrated library management system (ILMS) portion of the UH Library's computer facility.

Has ultimate responsibility for insuring that the library's ILMS is operational and usable by the University community—students, faculty, staff—as well as by the library staff. Responsible for making final decisions regarding technical changes or "quick fixes" which impact on the immediate and long-term ability to keep the system "up" and available.

Responsible for the technical review and control of daily ILMS hardware upkeep and maintenance, for monitoring all installations; reviewing recommendations of hardware purchases for their system-wide integrative compatibility and evaluation of maintenance coverage provided by vendors. Makes final recommendations on ILMS hardware acquisition to the library's Head of Systems.

Monitors library ILMS transaction records on a routine basis. Sets up and evaluates the efficacy of library computer facility procedures and employee's performance with respect to computer facility activities.

Reviews and modifies as necessary established security provisions, monitors enforcement of same, and works with library administrators to enhance and improve these provisions as necessary.

Responsible for computer operations training and supervision of computer systems support activities such as maintenance of the magnetic media library, environment support equipment, and computer facility operation tasks.

In the event of ILMS system errors, the UH Computer Specialist II must contact this position which will in turn contact the hardware/operating system maintenance vendors.

B. High Level Systems Analysis and Software Development

45%

Reviews informational and statistical needs of the library's ILS financial, technical, and public service systems. Confers regularly with Library administrators to determine the nature, form and adequacy of the information and reports supplied.

Is responsible for supervision of projects involving ILS operating system software development, implementation, and maintenance; analyzes and defines project tasks necessary to improve library's online system processing capabilities, enhance system security and develop operational controls. This position also plans and schedules time-phased project elements; lays out work for and delegates tasks to project members; provides advice and assistance. For example: runs tests of magnetic tapes for hardware or software errors and manages the tasks required to correct any detected errors.

Reviews modularization of coded programs developed by team members to ensure maximum functional flexibility in ILS operating system software and optimum efficiency in machine utilization of the computer facilities of the library. Example: a program which outputs all catalog records for microforms originally takes four months to run — the position must optimize code so that the program can run in one month.

Designs program logic; does some minimal coding of machine instructions utilizing languages such as Tandem's Transaction Application Language (TAL), C, C++ and JAVA™, UNIX. Designs and supervises the implementation of complex projects utilizing the integral Tandem's Transaction Application Language (TAL), C, C++ and JAVA™, UNIX. Is responsible for supervising the implementation of the final version of complex systems level programs. Supervises programmers who design program logic, code machine instructions utilizing languages such as Tandem's Transaction Application Language (TAL), C, C++ and JAVA™, UNIX; compile programs, test, debug and document system level programs.

As the library's ILS computer installation stretches and expands the known capacity of existing server systems, this position must stay abreast of current, state-of-the art computer system level software, firmware and hardware developments, including maintaining an awareness of computer design. The position must be able to work with a wide variety of computer and computer support vendors to stay abreast of emerging technological developments. Must make recommendations for the enhancement of the computer facility and its components to maximize technical efficiency of the ILS database while maintaining cost effective operations.

C. Performs other related work as required.

10%

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Names, class titles and position numbers of subordinate positions:

Lai Hipp, Sean C., UH Information Technology Specialist, Position No. 80230

Takehara, Randy T., UH Information Technology Specialist,
Position No. 81107T

Equipment critical to work performance:

Servers

input/output devices, disk drives, printers

Communications equipment (multiplexers, modems, ports)

Describe the nature and extent of instructions received and guidelines available for performance of assigned duties and responsibilities:

Position receives initial training in Library ILMS operation, consults written manuals from relevant software, hardware and firmware vendors. Position works with Systems librarians to establish operational objectives in line with library priorities.

Describe the nature and extent of the review of the work:

Work is reviewed primarily by observation of computer system managerial effectiveness, review of progress toward meeting established objectives for the Library's automated system operation and effectiveness in guaranteeing system availability.

Describe the nature, purpose and impact of contacts with other units than your own, with outside organizations and with the general public:

Position works with IT Specialist, Position No 81894 (Desktop Network Services), to coordinate data communications networking related to the ILMS and to facilitate access to non-ILMS equipment housed in the computer facility. Position has contact with Heads of other units in Library, the Associate University Librarian and University Librarian. Also must deal with outside contractors, librarians and computer specialists from UH System Libraries and personnel of ITS and other information and telecommunications related units.

Minimum Qualifications

See Class Specifications

Desirable

- Ability to effectively communicate orally and by written reports and procedures.
- Thorough knowledge of statistical analysis methods and techniques.
- Experience applying the above skills and knowledge to information processing tasks in an academic library environment.

March 1999

UH Information Technology Specialist
Desktop Network Services

Duties and Responsibilities

This is complex, advanced professional and supervisory work related to microcomputer and client/server hardware and software technology used in the University of Hawaii at Manoa Library (Hamilton Library and Sinclair Library). Position is responsible for work of technical independence involving installation, configuration, troubleshooting, modification, upgrading, administration, maintaining and enhancing desktop microcomputer workstations and network servers, data communications devices and microcomputer peripheral equipment such as printers, barcode readers, digital scanners. In addition this position works in a collaborative team environment with other technical and professional staff within the unit to support internet/world wide web connectivity, library services and processing operations.

A key technical responsibility of this position is the support of all desktop equipment and software in consultation with the Librarian Head of the Desktop Network Services department. This position requires both a wide range of technical expertise and good communication skills. Work in the unit involves planning, troubleshooting, coordinating, scheduling and participating in ongoing installation, administration, maintenance, reconfiguration and expansion of an elaborate distributed computing environment consisting of a variety of hardware and software installations. Work includes coordination/supervision/scheduling of student assistants performing technical support duties, developing budget projections and monitoring student salary expenditures. Tasks include participation in the help desk operation (which supports students and faculty accessing information resources, library staff performing service, processing and office operations, and faculty using library classroom facilities). Work also includes assisting with system administration support for 9 or more Windows and Unix-based servers, including the library web page server and proxy server.

Work entails consultation and coordination with departmental IT and library administrators, faculty and staff; utilization of specialized skills and knowledge in the areas of microcomputer and resource networking technology. Work requires analysis of user needs and examination of alternative solutions which might meet those needs; ability to apply results of analysis to make appropriate and cost-effective decisions, devise long term strategies and direct students performing day-to-day microcomputer-related technical support activities. The person filling this position must have the ability to work with people possessing a wide range of knowledge levels. Flexibility and ability to operate independently are essential. Attention to detail and ability to manage intricate office and purchasing procedures, adherence to policies, understand, interpret and apply Library, campus and State procedures, practices and standards is required. Work is performed under general administrative direction, with appropriate consultation and guidance from librarians and IT Specialist in the unit; responsibilities are exercised with independent initiative and judgement. Supervision received is minimal and non-specific. Work is reviewed through observation of results and reports.

Examples of the kinds of equipment and software involved in the position's activities are: data communications circuits and cabling systems, network routers (Cisco in particular), data communications test equipment, UNIX and Windows NT and Windows2000 servers, Windows 9x and NT and Macintosh computer workstations, networked printers; network and server OS software, datacomm equipment testing software, workstation software, and other equipment and software related to the activities listed below. Examples of complex microcomputer hardware and software problems position resolves and description of what is involved, include the following typical scenarios:

- Continue researching problem with public workstations displaying intermittent illegal operation messages, check web for discussion of specific error.
- Troubleshoot software problem while upgrading to latest monthly revision of program used by all technical services staff to assist them in performing their work, call vendor and search online knowledge base and help files. -
- Troubleshoot printing problem in Circulation department. Temporarily created a printer port for them on server and setup printing from just 5 workstations.
- Continue work on upgrade of Win2K servers; applied SP1 and High Encrypt to see if it resolves problem of making domain controller function work correctly.
- Called Panasonic tech support to troubleshoot Science Reference department KX-SP100 printer problem. Error codes mean the logic board needs to be replaced;
- Troubleshoot Business Reference Department Index Server problem by looking for information on MS Technet site. Tried changing some of the default settings back to old settings; tried creating another catalog, the same way the previous Index Server was setup.
- Checked reported connectivity problem in Serials department- will have to change one of the datajacks to a 57 IP port address on the network.
- Working on Monograph department network printer problem. Performed registry edits to remove the old printer port information; replaced jet direct card; reconfigured the printer settings on server.
- Win2k server upgrade: testing if DNS is setup correct, looked for DNS testers on web, evaluated them. Trying different test scenarios: develop schedule of events for when Win2K server is put in production (test logins, printing, shared connections, etc.)

- Staff member reports cataloging program not working and giving her a msghook.ocx run-time error 339: tried replacing msghook.ocx file with a copy-didn't work: reinstalled the software
- Checked server event logs for any errors.. Set parameters to double the event log and shorten the history of events that occur: should delete old events to create space for newer events to better track problems and hackers.: applied additional security patches to IIS: applied client licenses to the server. Fixed the licensing manager on the domain controllers; one wasn't replicating to the other; fixed the time synchronization event
- Troubleshoot network connectivity on 5th floor;tried swapping the patch cables;checked the 5505 router on the ground floor and it show no activity;tried connecting into another fiber port; contacted ITS. Fixed Cat's network connectivity problem w/ ITS - one of the ports in the patch panel was bad; swapped ports and network connectivity restored. ITS will contact the contractor for the cabling to fix.
- Server hacked into and affected w/ the sadmind virus. Uninstalled IIS and checked logs of suspect entries.To bring the server back online w/out infected stuff, tried to see if we could quickly restore data from a previous backup tape. Tested to a test server first; checked server for unnecessary files and scanned all files on the data drive. Everything looks OK so put server back online. Changed the virus scan settings. Looked up the IP's on the event logs; notified ITS. Changed system partition to NTFS which will make the partition more secure.

1. Oversees support of all public and staff microcomputer, printing and related distributed computing equipment. Coordinates the timely deployment of equipment and software and ensures proper configuration and completion in accordance with plans. Performs or directs installations, configuration, operation, maintenance; tests, modifies, upgrades microcomputer, data communications and peripheral equipment. Equipment includes, but is not limited to: data communication hubs, routers, microcomputer systems (client and servers), networked and standalone printers, CD ROM drives, scanners, and other peripherals. Uses service manuals, diagrams, schematics and appropriate software and test equipment to determine correct operation, troubleshoot defective equipment and circuits, locate faults, repair and/or replace defective components. Resolves complex microcomputer hardware and software problems by collaborating with other specialists, technicians and vendors and by applying knowledge of the limitations, capabilities, uses and service requirements of equipment and software. Works with Head of Department and IT Specialist to review and improve procedures as necessary, recommend upgrades and determine ongoing hardware and software requirements. 40%
2. Plans, organizes, and directs complex projects involving reconfiguration or upgrading of microcomputer and networked printing resources, based on consultation with librarian faculty, department heads and library administrators. Projects may include redesign of public computer installations and reallocation of datacomm hub equipment in order to maximize workstations available to library patrons. Such project require documentation of existing infrastructure and environmental limitations and consultation with vendors. Prepares recommendations, reports and diagrams to explain projects to administrators, library faculty and staff. Researches and prepares requests for quotations, sole source and/or sole brand justifications and request for written quotes or proposals for acquisition of new or additional microcomputer systems, upgrade components, software, peripheral devices. Advises the library fiscal officer in matters related to the procurement of microcomputer and network printing hardware. 10%
3. Prepares technical instructions or documentation and provides instruction in the operation of the wide variety of equipment described above in item #1. Participates in, and coordinates provision of service by, the department help desk operation. Reviews and prioritizes computer and printer-related work order requests from library departments. Assists users of facilities in resolving day-to-day problems with communications and electronic computer equipment and in devising new methods for maximizing available resources. Assists professional librarian and information specialist staff in microcomputer-based tasks and projects. 10%
4. Modifies existing microcomputer-related equipment to improve or change functions performed. Work includes tasks such as planning, installing, configuring upgrades of RAM; researching, locating, installing software and firmware upgrades and/or patches that resolve hardware function problems, or close "bug" and "hacker" security flaws; consulting with vendors and obtaining, installing, configuring firmware patches and upgrades for equipment such as networked laser printers, video cards, system chips within computer CPUs which add new or improved features or prevent and/or bypass problematic functions thereby preventing system crashes, hangs, erroneous performance of software, or incompatibilities with connecting equipment and software programs. Confers with department staff, Head and/or others to determine desired operation of modified equipment. Monitors performance of programs or scripts which facilitate the functioning of networks, equipment and software; performs or assists with performance of system recovery on mission-critical microcomputers and network servers (i.e. hacker or virus attack on debit-printing server, or staff LAN server). Performs basic server system administration tasks related to adding users, checking license compliance, maintaining security patches, backups, troubleshooting. Serves as backup administrator for library computing services comprised of NT/Windows2000 and Unix servers, and Ethernet network supporting over 300 nodes. 15%

5. Oversees and coordinates work of highly technically skilled students; manages student employment budget and student personnel related tasks, including timesheets, budget projections, preparing allocation requests, tracking of expenditures, etc. 10%
6. Coordinates with suppliers and contractors of microcomputer equipment and components to insure timely maintenance, parts exchange, repairs and receipt of newly ordered material. Oversees and/or packs and ships microcomputer and data communications equipment. Acts as office contact and/or coordinates testing and repair of communication circuits and microcomputer-related equipment. Oversees preparation of requisitions for purchase and repair of equipment, software and supplies. Oversees scheduling of installations and repairs to insure timely performance of work. Develops, recommends, enforces and revises standards and procedures used in provision of support for all desktop computing and printing operations. Evaluates workstation security software and directs ongoing virus protection program, alerts staff to virus attacks. 10%
7. Maintains detailed inventory of all owned and leased microcomputer, data communication and peripheral equipment in the Library Services Program. Utilizes inventory information to generate reports and provide management information to library administration. Supervises preparation of disposal and transfer memos. Oversees compliance with software license agreements. 5%
8. Performs other duties as assigned.

**INDIANA UNIVERSITY
POSITION ANALYSIS QUESTIONNAIRE
CLASSIFIED STAFF**

Only new positions or positions with *significant* changes are to be submitted for review.

Doc. #:

FIS Position # none- new position (intended to replace two existing ½ time student positions)

Attach a copy of the FIS document creating or modifying the position.

I. GENERAL INFORMATION

Employee Name:

Position Title: Computer Support Specialist – Workstations and Peripherals

Campus Location: BL

Work Phone: N/A – New position

Division/Department: Libraries / Library Information Technology

Supervisors Name:

Supervisor's Title: Asst. Director of Information Technology

Phone:

Length of Time in Current Position (Years/Months):

N/A – New position

II. FOR POSITIONS SUBMITTED FOR REVIEW ONLY

Describe fully the areas of the position that have changed, what led to those changes (i.e. restructuring, reorganization, addition or removal of department responsibilities which impact the position) and what new skills were learned/needed to perform the work.

III. POSITION SUMMARY

In the space provided below, briefly explain in one or two sentences the general purpose of the position.

Provides technical support as 2nd tier respondent for Library workstations on the Bloomington campus (19 locations) with emphasis on needs of the staff and public workstation user of all levels. Installs, configures, provides training for, maintains, troubleshoots, and upgrades workstation hardware, network connectivity (including wireless), peripherals (printers, PDAs, scanners, etc.), and application software.

IV. DUTIES AND RESPONSIBILITIES

List in order of importance and explain the major duties and responsibilities of the position. Indicate also the average percent of time spent performing each separate job duty (percentages typically are not less than 5%). The percentages must total 100%. An example of a statement of duties and responsibilities is included with this questionnaire for your reference.

% of Time	Duties and Responsibilities
50%	Provides technical support, troubleshooting, and individual or small group user training for 900 + Library workstations with emphasis on hardware and workstation configurations. Installs, maintains, and upgrades operating system software and hardware components, with emphasis on those applications central to library services. Aids in troubleshooting issues with local and remote use of workstation assessable online resources, particularly as they are impacted by workstation configurations.
20%	Installs, configures, and maintains workstation peripherals, including printers, scanners, custom input/output devices, and other custom workstation equipment.
15%	Participates with other LIT team members in maintaining the hardware inventory and warranty agreements for the Library Information Technology division.
5%	Troubleshoots hardware/operating system problems. Works with vendors on repairing, replacing, and/or retiring computer hardware. Participate in planning for the introduction of new technologies and

5%	electronic resources. Work with the other Information Technology staff to provide training, technical briefing, information sharing, and written documentation.
5%	Study and investigate technical issues that impact workstation functions within the Indiana University Libraries. Maintain a current knowledge of the latest software, hardware, and network solutions.

V. KNOWLEDGE

1. Please indicate the *lowest level* of education and/or training usually required to understand and perform the work. Include specific degree, technical training, or post-high school course work and the field of study, if any, *required* to qualify for this position.

Minimum of associates degree with no less than 20 credit hours in computer science related course work; Must specifically have had a minimum of 3 credit hours at the 400 level or above related to use of technology in an instructional environment.

2. What licenses or certifications, if any, are *required* to qualify for the position?

None

VI. EXPERIENCE

1. Please describe the *least* amount (i.e. in months or years) and type of work experience required, if any, for a person entering this position. Please consider only the position's minimum requirements and not the individual's qualifications.

Amount	Type
18 month	Workstation computing support of Windows 2000 and/or Windows XP plus familiarity with both Mac and Linux/Unix operating systems in an academic, client/server networked environment
6 months	Training user/small groups in applied computer applications
2 year	Experience working with electronic databases and library centric services in a major university environment

VII. PROBLEM SOLVING

Provide two or three examples of the more difficult and complex tasks/projects/problems which this position has handled in the past twelve months. Indicate the types of judgments and/or decisions made in executing the work.

This position must be able to diagnose workstation problems that may relate to hardware, software, and/or network components. This position must also have the necessary skills/knowledge to integrate older versions of software/hardware with newer technologies.

This position must have enough knowledge about Library operations in order to determine the proper software and network configurations depending on the need of a given unit.

Individual must be able to calmly and professionally communicate in clear layman's terms with sufficient customer-oriented skills to skillfully, successfully communicate with frustrated, irate users of a non-technical background. Highly important to communicate concern yet maintain patience as well as demonstrated excellence in follow-up, tenacity, and feedback on particular problems.

Individual must be able to conduct user interviews and training in electronic databases which unites user needs and skills with appropriate library resources plus be thoroughly familiar with operations of a central academic help desk center in a major university environment.

VIII. SCOPE OF WORK

1. Indicate what types of errors could be made from performing the work in the wrong way and/or not taking proper precautions or carefully following procedures and regulations. Include in your response the types of negative consequences that might arise for your work unit or an area of the University from performing the work incorrectly.

Improper configuration of staff workstations could cause delays in Library services to faculty, staff, and students. If the incorrect version control procedures are not followed, units may lose critical data because of incompatible software.

Lack of proper training given to users upon installation of peripherals could directly contribute added work hours and inefficient operations by library staff that would detract from and delay fulfillment of services to patrons. Improper installation of peripheral equipment could damage both peripherals and associated workstations.

Failure to properly troubleshoot, diagnose, and repair workstation problems could remove needed equipment needlessly long from service and increase expenses in operating or repair costs.

Lack of ability to conduct user interviews and training in electronic databases which unites user needs and skills with appropriate library resources could result in ineffective use of library services by patrons and delayed fulfillment of service requests.

Unfamiliarity with LIT support models and service locations could result in misdirected responses or delayed solutions to trouble reports.

2. Describe the departmental policies and procedures or formalized regulations which guide the actions of the position (e.g. policies or procedures for handling an overdue account, dealing with a student's complaint, or repairing equipment).

Indiana University Information Technology Policies online at <http://www.itpo.iu.edu/>

Library Information Technology policies online at <http://lit.indiana.edu>

Policies and procedures regarding the use and distribution of software licenses and following contract stipulations of hardware service agreements.

3. With whom does the position regularly communicate inside and outside the University in order to perform duties (e.g. faculty members, professional staff, etc.)? What do you normally communicate about? How often do you communicate (daily, weekly, monthly, etc.)?

Who	Communicate About What	How Often
Library Staff	Service requests	Daily
Library Information Technology Staff	Work plans and assignments, project progress, day-to-day operations	Daily
UITs staff	Consulting, technology issues	Daily

IX. DIRECTION OF OTHERS

1. Is this position formally responsible in any way for the supervision or project direction of other University staff employees, student workers and/or temporaries?

Yes ☐ No ☒ If No, please skip to next section

2. Please check the applicable categories of worker(s) supervised and list position numbers and titles.

N/A

Regular Staff ☐ Student Workers ☐ Temporary Employees ☐

3. Briefly describe the nature and extent of responsibility for supervising other employees. Indicate the scope of authority as well as the frequency.

X. PHYSICAL/MENTAL EFFORT

Describe the physical demands of the position and/or the degree to which the position requires intense mental concentration and/or visual strain.

Must be able to: lift a standard workstation and monitor; Crawl under tables to connect cables and wires

XI. ORGANIZATIONAL REPORTING

In the organizational diagram depicted below, please indicate the reporting lines by completing the boxes with the appropriate title(s). The boxes are labeled according to the following key:

A. Job title of person to whom your supervisor reports:

Director, Library Information Technology

B. Your supervisor's job title

Assistant Director, Library Information Technology

C. Your job title

Computer Support Specialist – Workstations and Peripherals

D. Examples of other equivalent job titles to your position, i.e. at the same level:

Full time staff computer support assistants (CSAs) in Business, CASD, UGLS, LIT, and Science libraries (Some of these have reference duties as well, but applicability is to their I.T. related work.) ; Computer and Network support coordinators in the School of Business, UITs, and School of Education (ISS).

E. Job titles which directly report to you (if applicable)

See <http://www.lit.indiana.edu/who.html>

Please attach a copy of an organizational chart of your area or department.

See <http://www.lit.indiana.edu/who.html>

XII. EMPLOYEE GENERAL COMMENTS

Because no single questionnaire can cover every part of a position, can you think of any other information which would be important in understanding your position? If so, please give us your comments below.

N/A – new position.	
Employee Signature	Date

XIII. SUPERVISOR COMMENT SECTION

This portion of the questionnaire is to be completed by the employee's immediate supervisor. As a supervisor, it is important that you review this questionnaire and note any comments you may have. The space provided below is for general remarks you may have.

This position is essential to the day-to-day operations of Library Information Technology. Current structure is approximately three persons short of adequate support for the over 900 workstations on the Bloomington campus, so maintaining hardware and software that meets the expected level of service is a never-ending task. Past practice has been to employ two half-time students to bridge this shortfall, and the person described in this PAQ would replace them, as study has taught that the first priority in this position is experience and continuity in supporting the unique Library technological environment. This position must have knowledge regarding software compatibility, security/virus protection, and functionality of the newest version of network clients, all of this overlaid with extreme familiarity of how networked workstations and applications function in an academic library environment.

Immediate Supervisor's Signature	Date: 24 April 2002



Abbreviation: INF TECH I/S

Grade: 12

Union: APSA

FLSA: E

Code: 8745

Job Group: A2J2

Abbreviation: INF TECH I

Grade: 12

Union: APA

FLSA: E

Code: 8744

Job Group: A2J2

CLASSIFICATION: INFORMATION TECHNOLOGIST I/S

Basic Function

Provides independent complex professional support in one or more of the following information technology areas: software development, customer support, computer/systems operations, systems administration, systems software support, hardware support, communications network support, database administration, or a related technical area.

Characteristic Duties and Responsibilities

Software Development

- Independently meets with customers to determine information technology status, desires and needs.
- Develops complex technical specifications for entire systems.
- Performs functional systems design, including business function design, user interface design and database design.
- Develops, tests and implements complex applications software solutions.
- Prepares cost/benefit analyses, and performs other responsibilities related to business systems development.

Customer Support

- Provides independent general (first level) diagnostic support to customers for a broad range of technical areas. Resolves routine problems or questions and refers more complex issues to a more appropriate source.
- Independently works with customers to analyze problems or needs, and develops solutions drawing on a high level of expertise in position's assigned technical area to solve problems requiring novel uses of existing technology.
- Updates, trains and reviews the work of staff members in areas related to their assigned projects, develops new staff procedures in technical areas of expertise, and provides related professional IT support to the team.

Database Administration

- Independently designs, modifies and implements databases and database support software.
- Acts as a consultant to unit staff regarding applications and related support software.
- Monitors database applications for optimal performance.
- Monitors the physical size of databases and estimates size needs.
- Changes designs of databases and/or indexes to accommodate changing application needs or environmental factors which affect database performance.
- Migrates database applications and changes from testing to production.

Computer/Systems Operations

- Develops and implements systems software, production systems, and related operations and project policies, procedures, standards and practices.
- Installs, implements and supports systems software/hardware products.
- Reviews, analyzes, evaluates, recommends and administers new or enhanced operational activities, production methods, hardware and systems software products.
- Maintains unit or departmental operations systems and prepares related documentation.
- Performs related operations analysis and project support duties.

Systems Software Support

- Provides independent professional systems programming support for multiple platform operating systems (e.g. MVS, AIX, UNIX, WinNT) and related system level software packages.
- Plans and installs complex systems software.
- Checks available storage space and runs programs to realign and free up disk space.
- Develops and implements systems software, production systems, and related operations and project policies, procedures, standards and practices.
- Installs, implements and supports systems software/hardware products.

Departmental Systems

- Performs duties as described for Computer/Systems Operations and Systems Software Support and/or duties as described for Software Development.

Supervision of Computer Operations

- Monitors processing, identifies and resolves abnormal or error conditions, performs initial machine and program loads, schedules jobs using automated software scheduling packages, initiates backups, monitors environmental processes, and performs related responsibilities.
- Interviews, selects, trains, evaluates and reviews the performance of support staff.
- Coordinates overall production schedules to meet customers requirements.
- Performs duties as described for Computer/Systems Operation and Departmental Systems.

Training and Development

- Analyzes, develops and oversees instructional development classes, seminars, workshops and related projects.
- Makes presentations, prepares documentation, and consults with customers in order to explain current and projected educational programs and technologies.
- Uses instructional design principles and computer knowledge in order to prepare and produce manuals and classroom materials.
- Evaluates instructional programs and tools to determine if they meet specifications of instructional design theories and operate to achieve optimal results.

General

- Independently plans or leads projects of moderate size (such as 2-3 team members), complexity, and duration.
- Participates as an independent, fully functioning professional member of large/complex project teams.
- Provides independent specialized (second-level) customer support as an identified expert in a particular technical area.
- Provides training and assistance to customers and internal staff.
- Maintains currency in the field through continuous learning.

Communication/Interpersonal Relationships

Interacts with:

- Unit Managers and Administrators - in order to answer questions, recommend and explain proposed technology solutions, resolve problems, and exchange information.
- Customers - in order to discuss projects and technology solutions; answer questions; provide training; explain work, systems and technologies; discuss technology solutions; resolve problems and exchange information.
- Coworkers - in order to answer questions, resolve problems, coordinate work, provide training in area(s) of specialization and exchange information.
- University Information Technology Professionals - in order to discuss projects, review work, resolve problems and exchange information.
- Designated Supervisor/Project Leader - in order to receive assignments and direction, answer questions, discuss work and exchange information.
- Suppliers - in order to review products, resolve problems and exchange information.

Responsibility for the Work of Others

May provide first level supervision over regular employees. Those positions responsible for the supervision of regular employees are identified with a /S following the title.

Responsibility for the Health/Safety of Others

No assigned responsibility.

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Impact on Programs/Services/Operations

Effective fully independent performance of professional, technical and customer service responsibilities will lead to positive customer relations, quality work products, and high levels of support for larger work products and processes. Errors would normally take significant effort to find in succeeding operations and may result in lost information, damage to equipment, costly rework requirements, suboptimal and costly hardware and software purchases; and loss of time to customers and in other work processes.

Work Environment

Negligible disagreeable working conditions. The job requires moderate physical effort and involves viewing a VDT 26-75% of the time.

Education/Experience

This job requires a bachelors degree in computer science, information systems, business or related information technology field, with coursework in an information technology specialization related to the area of employment; one to three years of related and progressively more responsible or expansive work experience in an information technology area related to the duties to be performed; or an equivalent combination of education and experience.

Additional Requirements

1. May require valid vehicle operator's license where needed to perform duties of the position.
2. Other skills and/or physical abilities required to perform duties of the position.

"This description is intended to indicate the kinds of tasks and levels of work difficulty that will be required of positions that will be given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of any supervisor to assign, direct and control the work of employees under his or her supervision. The use of a particular expression or illustration describing duties shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty."

Date: 11/1996

MSU is an Affirmative Action/Equal Opportunity Institution

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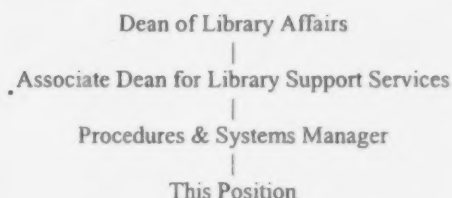
Classification: Procedures and Systems Analyst II

Department: Library Affairs – Library Support Services – Systems Services

FUNCTION OF JOB

Assist in the design, implementation and maintenance of the local area network, individual staff, and public computing equipment in Library Affairs. Analyze the computing resource needs of the Library users and recommend solutions to meet those needs. Install and configure commercial software packages and maintain system documentation.

ORGANIZATIONAL RELATIONSHIP



DUTIES AND RESPONSIBILITIES

- Assist the Procedures and Systems Manager in maintenance of the Local Area Network (LAN) in Morris Library.
- Install, test, maintain, and update software to make effective use of Library resources.
- Maintain Windows NT network workstations, both staff and public installations in the Library.
- Monitor and analyze service breakdowns and malfunctions to determine appropriate action.
- Direct telephone and e-mail service requests to appropriate staff members.
- Respond to urgent system problem reports during extended weeknight and weekend hours.
- Review current systems and make recommendations for enhancements.
- Analyze and prepare cost estimates of system enhancements.
- Assist in the development and maintenance of procedure manuals.
- Serve as technical liaison for special projects such as the Music Listening room, Disabled Student Services equipment and the technology training classroom.
- Supervise and maintain work schedules and assignments for Systems student workers.
- Maintain procedures and systems documentation including but not limited to:
 - Building wide computing equipment inventory
 - Surplus property
 - Laser printer operations and maintenance
 - Music Listening room technical resources

- Disabled Student Services computers and software
- Assist in developing training sessions and materials for Library technologies.
- Perform related duties as assigned.

KNOWLEDGE REQUIRED FOR THE JOB

- Knowledge of Microsoft Windows NT Server and NT Workstation operating systems.
- Knowledge of Local Area Network software, topologies and protocols.
- Knowledge of telecommunication network wiring standards and practices.
- Familiarity with library automation procedures.
- Demonstrated experience with local area network hardware and software, personal computers, and telecommunications hardware.
- Knowledge of token-ring and Ethernet network hardware and software configuration.
- Ability to plan, coordinate, and implement data processing operations, to troubleshoot problems, and to express complex ideas both orally and in writing.

RESPONSIBILITY

A. Supervisory Controls

Overall assignments and priorities will be set by the Procedures & Systems Manager. The individual will be expected to function with minimal direct supervision and will be expected to work well with library staff and with technical staff in other departments.

B. Guidelines

Follows the policies, guidelines, and procedures established for Morris Library and other appropriate campus agencies (i.e. Telephone Services and Information Technology). The incumbent may receive instructions in oral or written form.

DIFFICULTY

A. Complexity

This position requires a high degree of problem-solving skills and troubleshooting abilities. The incumbent must possess knowledge of software, computer programming, electronics, telecommunications, and have good oral and written communication skills.

B. Scope and Effect

As this position will interact with every department in the Library and with persons and departments external to the Library, decisions and recommendations made by the individual will be subject to approval by the Procedures & Systems Manager..

PERSONAL RELATIONSHIPS

The incumbent will be required to deal with department heads, faculty, and staff members of the Library, as well as Information Technology and other systems support personnel outside the University.

ENVIRONMENTAL DEMANDS

The individual will work indoors but may, on occasion, be required to work outdoors while transporting equipment. The position requires the individual to be capable of lifting equipment weighing as much as 50 pounds and the ability to work in very confined spaces such as wiring closets and under desks

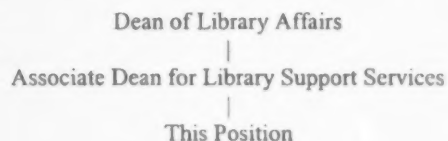
Classification: Procedures and Systems Manager

Department: Library Affairs – Library Support Services – Systems Services

FUNCTION OF JOB

Analyze the computing resource needs of the Library and recommend solutions to meet those needs. Administer and maintain online Library computer resources.

ORGANIZATIONAL RELATIONSHIP



DUTIES AND RESPONSIBILITIES

- Review, evaluate, and recommend new systems to enhance user access and expand network services. Develop specification, testing and integration plans for new systems and services.
- Propose recommendations regarding Library Affairs network needs; advise on special projects and questions on policies and procedures.
- Administer and maintain the Windows NT network operating system, the ERL CD-ROM system, UNIX systems and services.
- Communicate with external entities in relation to institutional requirements, providing explanations of its needs.
- Develop, review, recommend and implement methods, procedures, and systems for the Library Affairs network.
- Direct the maintenance of user manuals and training materials.
- Perform related duties as assigned.

KNOWLEDGE REQUIRED FOR THE JOB

- Demonstrated extensive knowledge of local area network hardware and software, personal computers, and telecommunications hardware.
- Ability to plan, coordinate, and implement data processing operations.
- Ability to express complex ideas both orally and in writing.
- Ability to analyze and troubleshoot problems.
- Ability to organize work.
- Ability to analyze, evaluate, and develop new and revised operating systems.

RESPONSIBILITY

A. Supervisory Controls

The Associate Dean for Library Support Services will set assignments and priorities. The incumbent is expected to function with minimal direct supervision.

B. Guidelines

Follows the policies, guidelines, and procedures established for Morris Library and other appropriate campus agencies (i.e. Telephone Services and Information Technology).

DIFFICULTY

A. Complexity

This position requires a high degree of problem-solving skills and troubleshooting abilities. The incumbent must have computer programming, electronic, and telecommunications skills.

B. Scope and Effect

As this position interacts with every department in the Library. The services provided are vital to the staff and users of the Library. Policy decisions and recommendations made by the incumbent will be subject to approval by the immediate supervisor.

PERSONAL RELATIONSHIPS

The incumbent will be required to deal with department heads, faculty, and staff members of the Library, as well as Information Technology and other systems support personnel outside the University.

ENVIRONMENTAL DEMANDS

The position requires the individual to be capable of lifting equipment weighing as much as 50 pounds and the ability to work in very confined spaces such as wiring closets and under desks

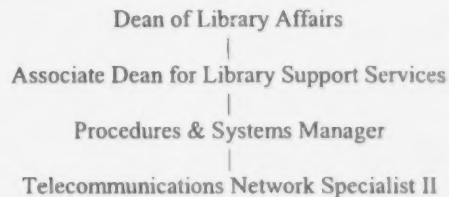
Classification: Telecommunications Network Specialist II

Department: Library Affairs – Library Support Services – Systems Services

FUNCTION OF JOB

Provide user support of the Library's microcomputer and local area network systems, both Microsoft NT server and UNIX Solaris based. Analyze the computing resource needs of the Library and recommend solutions to meet those needs. Develops, implements, and maintains software for Library Affairs activities. Works closely with staff in Instructional Support Services with regards to Library software development.

ORGANIZATIONAL RELATIONSHIP



DUTIES AND RESPONSIBILITIES

- Assist the Procedures and Systems Manager in administering the Local Area Network (LAN) in Morris Library. The network is Microsoft NT Server based.
- Install, test, maintain, and update LAN software to make effective use of Library resources.
- Maintain NT-based workstations, particularly for the public installations in the Library.
- Maintain various CD-ROM products, including networked, Meridian server, and stand alone.
- Maintain online product access development (Infotrac, etc.)
- Assist in maintaining UNIX-based operating systems in Morris Library, for example, the domain name server and POP mail service.

Develop, implement, and maintain programs to access library resources using PERL, C++, and other CGI scripting languages.

- Monitor and analyze service breakdowns and malfunctions to determine appropriate response action.
- Monitor and analyze equipment and network performance data to confirm problem areas and deficiencies, with responsibility for determining corrective procedures.
- Perform complex network customizations, analyses, and maintenance functions using appropriate software.
- Recommend network documentation procedures.
- Evaluate and recommend limited changes or modifications to network designs.
- Coordinate new vendor equipment installations and perform acceptance testing.
- Perform related duties as assigned.

KNOWLEDGE REQUIRED FOR THE JOB

Knowledge of Microsoft NT Server and Solaris UNIX operating systems. Knowledge of LAN software and architecture. Familiarity with library automation procedures. Demonstrated experience with local area network hardware and software, personal computers, and telecommunications hardware. Knowledge of token-ring network hardware and software configuration. Ability to plan, coordinate, and implement data processing operations, to troubleshoot problems, and to express complex ideas both orally and in writing. Familiarity with C++, PERL, and HTML.

RESPONSIBILITY

A. Supervisory Controls

Overall assignments and priorities will be set by the Procedures & Systems Manager. The individual will be expected to function with minimal direct supervision and will be expected to work well with library staff and with technical staff in other departments.

B. Guidelines

Follows the policies, guidelines, and procedures established for Morris Library and other appropriate campus agencies (i.e. Telephone Services and Information Technology). The incumbent may receive instructions in oral or written form.

DIFFICULTY

A. Complexity

This position requires a high degree of problem-solving skills and troubleshooting abilities. The incumbent must possess knowledge of software, computer programming, electronics, telecommunications, and have good oral and written communication skills.

B. Scope and Effect

As this position will interact with every department in the Library and with persons and departments external to the Library, decisions and recommendations made by the individual will be subject to approval by the Procedures & Systems Manager.

PERSONAL RELATIONSHIPS

The incumbent will be required to deal with department heads, faculty, and staff members of the Library, as well as Information Technology and other systems support personnel outside the University.

ENVIRONMENTAL DEMANDS

The individual in this position must be free of any disabilities that would affect sight, hearing, speech, manual dexterity, or mobility that would restrict his/her ability to perform the duties required in this position. The individual will work indoors but may, on occasion, be required to work outdoors while transporting equipment. The position requires the individual to be capable of lifting equipment weighing as much as 50 pounds and the ability to work in very confined spaces such as wiring closets and under desks.

Organizational Chart:

Director, Library Information Technology Services				
Senior Library Systems Administrator	Library Systems Administrator	Library Systems Administrator	Library Systems Administrator	Workstation Support Specialist

Job Descriptions (brief format):

Director: (currently being rewritten - will be submitted when completed)

Senior Library Systems Administrator:

This position is the senior one of 3 within the unit which are collectively accountable for the services provided on the UNIX servers of Western Libraries.

The primary areas of accountability for this position are:

- the design and coordination of all systems administration activities required to maintain a stable computing infrastructure for library services;
- the coordination of investigations into new or improved services on the UNIX servers;
- the design and development of new services approved for implementation on the UNIX servers and the computing architectures required to support them;
- ongoing maintenance of the Sun Ray servers and the staff server, including the staff e-mail system;
- ensuring that UWO security policies and guidelines are followed;
- programming support for record loads on the III system.

This position is also responsible for overall coordination of all unit activities when the Director is away.

Library Systems Administrator (one of 3):

This position is accountable for a number of important network services provided for both library patrons and library staff.

The primary areas for which this position is accountable are:

- network monitoring (tracking ongoing usage and security issues);
- development of new network architectures (e.g. wireless networking) and new or

- improved network services (e.g. printing for mobile computing);
- printing services for public workstations;
- staff network services (network drives, printers); and
- support for networked Windows-based resources.

These areas involve a wide range of activities, such as systems administration for the Windows NT/2000 servers, communicating with the vendors who supply the software required for these services, trouble shooting problems reported by library staff, developing mechanisms for monitoring our library networks to identify problems at an early stage, and investigation into new networking initiatives (architecture and services).

Library Systems Administrator (one of 3):

This position is one of 3 within the department which are collectively accountable for the services provided on the UNIX servers of Western Libraries.

The primary areas of accountability for this position are:

- Western Libraries' Intranet and the services it provides for library staff;
- maintenance of the computer account structure on our staff server;
- installation and support for the applications available on the SunRays (our primary public workstation);
- technical support for initial set up for our growing collection of databases and full-text indexes now stored on servers around the world, plus ongoing problem solving required to maintain stable and reliable access.

This position also provides backup support for the areas which are the primary responsibility of the other two UNIX systems administrators.

Library Systems Administrator (one of 3):

This position is one of 3 within the workplace which are collectively accountable for the services provided on the UNIX servers of Western Libraries.

The primary areas of accountability for this position are:

- the coordination and technical support for the public web site and proxy server, and responses to messages sent to 'webmaster';
- systems administration support for the web/proxy/Tarantella server;
- secondary support for the SunRay and staff servers;
- development and ongoing support for database-driven services on both the public web site (e.g. Resources by Subject) and the Intranet;
- ongoing development of new web-based services on the public web site.

The incumbent also provides backup support for the areas which are the primary responsibility of the other two UNIX systems administrators.

Workstation Support Specialist:

The Workstation Support Specialist is accountable for the maintenance of all staff and public workstations (PCs, Sun Rays, etc.) within the 7 locations of Western Libraries, and for supporting Library staff in their use.

The primary areas of accountability for this position are:

- installation, maintenance and tracking of approximately 200 public and staff PCs;
- maintenance of approximately 450 Sun Ray workstations in the 6 libraries;
- supporting library staff in the use of the standard set of staff applications;
- ensuring that all library PCs have the current virus protection software installed and that it is kept up-to-date.

The incumbent also provides backup support for the Library Systems Administrator responsible for staff network services, public printing services and our Windows-based products.

SPEC Kit 271

Library Systems Office Organization

Policy and Procedure

University of British Columbia Library
Policies and Procedures

E SYSTEMS

Policy E1

Revised: August 1998

**ACQUISITION, LICENSING, INSTALLATION, AND MAINTENANCE OF LIBRARY
COMPUTER EQUIPMENT AND SOFTWARE**

Responsible administrator: Systems Manager

Application and purpose: to ensure that equipment and software support staff work-related activities and general public use for scholarly and research purposes, reflect Library systems equipment standards, are correctly specified, are fully licensed, and are properly installed and maintained by qualified staff.

1. Library staff computers and software are owned by the UBC Library and are acquired to support staff work-related activities and general public use for scholarly and research purposes. The Library undertakes to provide the most appropriate equipment for these activities, and individual staff network, hardware and software requirements will be determined and addressed through the UBC Library's Equipment Want List procedures. To assist with this process, Library Systems Division will periodically revised and issue specifications outlining standard hardware configurations and systems wide software packages.
2. Hardware and/or software requests should include detailed equipment specifications for hardware, and specific version information for software. Library Systems Division staff will verify and approve the technical aspects of the request and forward them to the Library Financial Manager and/or other appropriate Library Administration members for final approval.
3. Responsibility for installation, maintenance, and upgrading of network, hardware and software will reside with the Library Systems Division. Only Staff Authorized by Library Systems Division (SALS) which includes Library Systems Division staff, local branch or division staff trained by Library Systems Division, and others authorized by Library Systems Division, will change hardware or network components, install or de-install operating systems, or install or change any software, hardware, diskettes or CDs other than individual files (for example Email messages, text/spreadsheet documents, screensavers, etc.) whose content is the responsibility of the staff member. A SALS will be contacted to arrange for the installation or any maintenance of hardware or software.
4. Staff may, as part of their work, download or bring in disks with programs (for example, demonstration or sample software) or data from other computers or vendors. It is the staff member's responsibility to ensure in such instances that the diskettes, software or data are free from viruses or other problems. Staff will consult with a SALS if they are unsure about the suitability and/or consequences of loading or using an individual product on Library computers. Staff must report immediately any systems warning messages about viruses or other problems to authorized library staff. Non-standard programs or data may be removed from Library computers by a SALS if they impede the normal operation and maintenance of that equipment. Every reasonable effort will be made to inform appropriate staff when such action is necessary and, if necessary, to determine a more suitable method to install and/or use these programs or data.

5. The use of pirated software on Library computers is a violation of University policy and of copyright law, and can result in legal action against the University by software vendors. All software installed permanently and used on an ongoing basis on Library computers must be purchased commercial software registered with Library Systems Division, or public domain software. A SALS will remove immediately any pirated software they find installed on Library computers, and report such instances to the Systems Manager. Staff members who use pirated software are subject to disciplinary action.

6. Library Systems Division will maintain a central register of all Library computer equipment, its location, dates of installation and service, warranty and maintenance arrangements; and license and registration information on commercial software in use at the Library. Changes in location of any computer equipment will be undertaken in consultation with an SALS.

Index terms:

Computer Equipment

Software

Installation of Computer Equipment

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University of British Columbia Library
Policies and Procedures

E Systems

Policy E3

Revised: June 1999

SECURITY AND PRIVACY FOR ONLINE SYSTEMS AND LIBRARY COMPUTERS

Application: To all Library staff

Responsible administrator: Systems Manager

Application and purpose: to define situations which may require the use of special systems software to assist in troubleshooting or monitoring online systems activity or other computer-related problems, procedures to be followed in these instances, and general expectations of privacy associated with the Library's online systems.

1. The privacy of online Library systems use and data stored in a staff member's computer files, including but not limited to Email folders, word processing documents and Web bookmarks, will be maintained as far as possible. Access by others to a staff member's online sessions and computer files is prohibited except as specified below.
2. In response to a staff member's request to resolve a systems-related problem, Library Systems Division staff may need to monitor a staff member's online session or examine their computer files. In order to perform this work, the Library Systems Division staff member will first inform the user before invoking any special systems software to assist in resolving the problem, or viewing data in computer files. Such examination will be limited to what is required to solve the problem. The Library Systems Division staff member will also inform the user when the execution of any special systems software has been terminated. Any data collected will be kept confidential and not retained or stored for any longer than required to resolve the problem. In some instances, it may be necessary to forward a copy of the collected data to a third-party vendor representative or systems support service.
3. Library Systems Division staff may also need to monitor a staff member's online session or examine their computer files:
 - (a) in case of emergencies. Emergencies include but are not limited to system crashes, warnings of viruses or potentially harmful or illegal programs, potential problems discovered in the course of routine maintenance, and threats;
 - (b) if, as determined by the University Librarian, there is probable cause to believe that the staff member has violated the UBC Appropriate Use of Information Technology guidelines, Federal and Provincial legislation, the common law, University and Library policies and policies established for networks interconnected with UBC (e.g. Bcnet); and
 - (c) pursuant to a search warrant or court order.

4. Any investigation for cause must be authorized in writing by the University Librarian, and will include the following steps:
 - (a) at the direction of the Systems Manager, Systems Division staff will make copies of any data collected from relevant online sessions and/or computer files;
 - (b) the staff member concerned will be notified in writing by the University Librarian of the investigation and the reasons for it;
 - (c) the collected data will be examined by the University Librarian.
5. If there is no violation as described in 3(b), the staff member concerned will be informed and the collected data will be destroyed. If there is evidence of a violation or inappropriate use, the staff member concerned will be informed, systems access may be suspended, and appropriate action taken as described in Policy E2.

Index terms: Privacy
Computer files, privacy and security
e-mail, privacy and security

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Temple University Libraries
Computing and Software Policy
May 30, 2000

I. INTRODUCTION AND GENERAL PROVISIONS

To enhance the computing environment for all University Libraries staff, departments, and offices, this document establishes a standard policy and procedures for computing hardware and software acquisition, installation, use, and compliance.

While this policy applies to all computer hardware, including peripherals, and software acquired by or on behalf of the University Libraries, the governing documents for the University – *Temple University Software Policy* <<http://www.temple.edu/news/software.html>> and *Temple University Computer Usage Policy* <<http://www.temple.edu/news/usage.html>>, *h/f*, “the governing documents” – are the authority for all of Temple University.

community

The “User Agreement” form protects the University by ensuring that all have read and agree to abide by the policies enumerated in the governing documents. The Agreement is signed by all full-time, part-time, and student assistant staff in accordance with University Policy, and held in the Administrative Office.

II. HARDWARE

A. General

Computer hardware acquired by or on behalf of the University Libraries is the property of Temple University. The *Temple University Computer Usage Policy* is the prevailing document for all computer usage within the Libraries.

B. Acquisition, Installation, and Maintenance

Hardware purchases for staff use are originated by the Head of Library Systems and Technology in consultation with the Head of the requesting Department. Hardware purchases for public access are originated by the Head of Library Systems and Technology in consultation with the Technology Steering Committee. In either case, purchasing information is maintained by the Head of Administrative Services and license information for any accompanying software is maintained by the Head of Library Systems and Technology.

Hardware acquired by purchase will normally be sent to the Library Systems and Technology Department upon receipt. Unusually large hardware will be sent directly to the requesting Department who will notify the Library Systems and Technology Department upon receipt.

Hardware is installed, configured, and maintained by Library Systems and Technology Department personnel or, when appropriate, by designated personnel in the requesting Department. Hardware received as part of a contract agreement (e.g., public access laser printers) is installed, configured, and maintained by contract personnel.

C. Staff Workstations

1. Passwords

Computing equipment must be readily accessible at all times to any personnel – including, but not necessarily limited to, Computer Services personnel, Library Systems personnel, and Supervisors – needing it to conduct the business of the University. Passwords should not be installed on any staff computers unless a specific need for one has been identified. Requests for exception should be forwarded to the Head of Library Systems and Technology by the appropriate Department Head or his/her designee.

2. Previously Used Workstations

The Library Systems and Technology Department will maintain an image file of a generic staff workstation in an appropriate format and location. Upon consultation with the Department, workstations previously used by an employee who has left the position will be erased and overlaid with the image prior to

reassignment. The employee subsequently assigned this equipment is then fully responsible for its contents in accordance with the governing documents of Temple University. The image file may also be used as a last resort in resolution of software problems on staff workstations at the discretion of Library Systems and Technology Department personnel.

D. Public Workstations

There are three standard public workstation setups:

- Catalog only: a computer setup that accesses the Diamond public catalog and no other applications or databases;
- SIC: a setup allowing access to all networked databases and the Diamond public catalog;
- Multi-use: a setup allowing access to multiple applications, including the networked databases and the Diamond public catalog

The Library Systems and Technology Department will maintain image files of the standard public workstation setups in an appropriate format and location. At the end of the Fall Semester, Spring Semester, and second Summer Session, Library Systems and Technology Department personnel will overlay the contents of all public workstations with the most recent versions of these files. Additionally, these image files may be used as a first or second resort in resolution of software problems at public workstations at the discretion of Library Systems and Technology Department personnel. All public workstations will be secured with appropriate software.

Designated staff in the appropriate Department will examine public access workstations regularly for extraneous software, possibly loaded by users; visible physical damage; and unusual hardware or software behavior. In the event that any of these are found, staff will notify the Library Systems and Technology Department. The Library Systems and Technology Department will assist staff in identifying any questionable software and provide an appropriate remedy for any reported or discovered anomalies.

E. Personal Digital Assistants

Personal Digital Assistant (PDA) devices not acquired by or on behalf of the University may be used with Libraries' computing hardware in accordance with University policy with the following additional guidelines:

- Devices may only be used with hardware assigned to the employee;
- Accompanying software must be licensed for use on at least two computers (it is assumed that the software is used at the employee's home); guidelines for shareware and freeware (see Section III.C. of this document) apply;
- Software and connectivity hardware (e.g., cables) are used at the employee's own risk and will not be supported or serviced by the Library Systems and Technology Department.

PDA devices acquired by or on behalf of the University are subject to the same policies and procedures outlined in this document and the governing University documents, including software audit and compliance.

III. SOFTWARE

A. General

Software licenses and media acquired by or on behalf of the University Libraries, or software developed by University Libraries employees or contract personnel on behalf of the University Libraries are the property of Temple University. The *Temple University Software Policy* is the prevailing document governing all software licensed by or used in the University Libraries.

This section only covers software purchased or developed for staff use in conducting the business of the University Libraries, or for public use as a locally administered electronic service. Policies for software accompanying books or other media in the Libraries' holdings are addressed in the document *University Libraries Access Policy for Library Materials in Electronic Format*.

B. Acquisition and License

Software purchases for staff use are originated by the Head of Library Systems and Technology in consultation with the Head of the requesting Department. Purchasing information is maintained by the Head of Administrative Services and license information is maintained by the Head of Library Systems and Technology.

Software purchases for public access – including individual applications, networked and stand-alone CDs, and web-based databases – are originated by the Chief Collection Development Officer or the Subject Specialists in accordance with Collection Development policies. The Chief Collection Development Officer will notify the Head of Library Systems and Technology when orders for new public access software are placed. Purchasing information is maintained by the Head of Acquisitions and license information is maintained by the Chief Collection Development Officer. The Library Systems and Technology Department will receive copies of license information for the purpose of assuring license compliance.

Software acquired by purchase will be sent to the Library Systems and Technology Department upon receipt if applicable. The Library Systems and Technology Department will maintain a master of the installation disk(s) or archive in an appropriate format as a back-up in accordance with the *Temple University Software Policy* (Section III.B.1.a.).

Staff software is installed, supported, and initially configured by Library Systems and Technology Department personnel or, when appropriate, by designated personnel in the receiving Department.

Public access software is installed by Library Systems and Technology Department personnel. If the software is part of a Libraries-wide "generic" installation, an image of the hard drive is made for storage on a Library server at that time. This image is used for restoration in the event of a mishap.

C. Shareware, Freeware, and Public Domain Software

Shareware – software made available by the publisher by download, but requiring a fee for continued use – may be installed on staff workstations for evaluation purposes. At the end of the evaluation period, the software must be removed from the hard drive or purchased in accordance with the procedures outlined above (Section III.B. of this document). In the event of audit, the user is responsible for any noncompliance as stated in the *Temple University Software Policy*.

Freeware – copyrighted software distributed by the publisher without payment obligation – and Public Domain Software – software freely available without restrictions of copyright – may be installed on staff workstations with the following guidelines:

- Freeware is not supported by the Library Systems and Technology Department unless the University Libraries or Temple University has standardized on that software. Examples of freeware "standards" are Netscape Communicator, WS FTP (LE), and the Adobe Acrobat Reader;
- The user must be able to show proof of a freeware license or public domain status; a link to the official web site established by the author/publisher (not a download site like C|NET or Tucows), or a printout of the freeware license (usually found in the "Help → About" menu) will suffice;
- Software found to conflict with the standard software suite or with any software required for completion of the employee's duties may be removed without recourse.

D. Updates and Upgrades

1. Definitions

For the purpose of this document:

Updates are incremental software improvements provided by the publisher at no charge. These are often "bug" fixes and offer no significant improvements or new features. Software updates are usually provided via download or through "at cost" media delivery, and are represented in a version indicator by incrementing a tertiary number or a revision letter. A change from *Netscape Communicator* 4.7.1 to 4.7.2 or *Microsoft Word* 97 to 97b would be an update.

Upgrades are major changes to software offering significant enhancements to features and functionality, and provided by the publisher upon payment of an upgrade fee. Software upgrades must be purchased unless the original license agreement provides for free upgrades, and are often represented in a version indicator by incrementing the primary or secondary number, or changing the name. A change from VirusScan 3.0 to 4.0 or from Eudora Light to Eudora Pro would be an upgrade.

2. Application

The Library Systems and Technology Department, with assistance from the Administrative Services Department when necessary, will acquire maintenance updates for standard issue software in accordance with licensing provisions, and develop procedures for Libraries-wide distribution. Updates for software used in limited areas will be acquired by the appropriate Department in accordance with licensing provisions and may be applied by the Department at any time upon notification of the Library Systems and Technology Department.

Upgrades are acquired in accordance with section III.B. of this document and University policy. Upgrades will be installed and initially configured by Library Systems and Technology Department personnel or, when appropriate, by designated personnel in the receiving Department.

Upgrades and updates to public access workstations will be installed and configured by Library Systems and Technology Department personnel at the end of the Fall Semester, Spring Semester, and Second Summer Session.

IV. DATA LOSS PREVENTION

A. General Provisions

The possibility of data loss is an unfortunate reality in a highly technological environment such as the modern library. While Temple University and the University Libraries take all practical measures to protect its systems against mishap, the individual user is ultimately responsible for protecting the integrity of his or her important data files.

B. Backups

All staff workstations are equipped with Zip™ drives and a simple backup program. Users are expected to backup their important data files regularly. The Library Systems and Technology Department will provide appropriate assistance in use of this software.

All software procured for the University Libraries is backed up in accordance with the *Temple University Software Policy* and section II.B. of this document. Backup of the Integrated Library System is performed on a regular basis by Library Systems and Technology Department and Access Services Department personnel. All other servers are backed up by Library Systems and Technology Department personnel.

The responsibility for backing up important data files rests solely with the individual user.

C. Virus Protection

All staff workstations are supplied with virus protection software licensed by Temple University. Users are expected to use this software regularly. The Library Systems and Technology Department will provide appropriate assistance in the use of this software.

The Library Systems and Technology Department will maintain virus protection for all University Libraries servers and public workstations.

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**Library Systems & Technology Department
Guidelines for Service Call Prioritization**

January 17, 2001

Revised April 9, 2002



The Library Systems & Technology Department's goal is to provide effective and efficient service. To meet that goal, the Department must prioritize allocation of staff and time to each call relative to existing services and other pending requests. These guidelines are used when assessing response to a request for service.

GENERAL ASSESSMENT CRITERIA

In general, when assessing requests for service, the following criteria are followed:

- Services to the public have priority over services to staff
- Networked services have priority over local, "stand-alone" services
- Shared systems have priority over individual workstations
- Existing services have priority over new implementations
- Units without alternative services have priority over units with alternative services

External deadlines and entities (vendors, other University units, etc.) and staffing levels may force deviation from these considerations at any time. Some activities such as daily backups, patron loads, and public-access re-imaging must take place according to schedule. Service requests will be addressed around them when possible.

SPECIFIC GUIDELINES

The Systems & Technology Department uses a five-level system of prioritization based upon the assessment criteria above. These are described below with examples and response time goals. "Response time" is **not** the same as "resolution time," but the time by which we will have made an effort to resolve the issue. Quick resolution is a goal, but actual time of resolution is subject to available resources, staffing levels, and other pending calls.

Priority 1 – Critical

Response time: Immediate.

Examples: Issues affecting system-wide service to the public. Inaccessibility of the Libraries' WebPAC, a CD or web server, or of several databases when access is under local control (e.g., WebSpirs or the SIC menu). Issues affecting system-wide availability of an ILS subsystem are also given this priority.

Priority 2 – Urgent

Response time: One business day.

Examples: Inaccessibility of a single database system-wide or of multiple services in one location, user education classroom hardware, or a staff computer not working. Issues affecting non-ILS activities of multiple staff and staff application servers are also given Priority 2 status.

Priority 3 – General

Response time: Four business days.

Examples: Individual programs do not work, or work oddly; however, most operations on the workstation (public or staff) function, allowing work to be done. This category includes locally mounted ("stand-alone") public services such as a non-networked CD, updates for networked CD products, and the creation of staff IDs and accounts.

Priority 4 – Inquiry

Response time: Fifteen business days.

Examples: Investigation of possible problems, improvements, or upgrades.

Priority 5 – New

Response time: As scheduled.

Examples: Implementation of new services and updates/enhancements to existing services. Included here is the installation of new CDs. Existing hardware, software, services, and projects will almost always take precedence over new services, though occasionally constraints of the academic year may move some new installations ahead. Regularly scheduled activities, such as software updates, daily/weekly back-ups, or patron loads.

Generally, new services are implemented, new hardware installed, and updates applied over inter-sessions between semesters. Requests for new installations at other times of the year are handled on a case-by-case basis.



**Library Systems & Technology Department
Service Call Request Procedures
November 3, 2000
Revised April 9, 2002**



I. INTRODUCTION AND GENERAL GUIDELINES

To maintain proper levels of service and facilitate the dissemination of information regarding status of equipment and library systems, the following procedures for computing service call requests have been established. These procedures will be reviewed annually or as the need arises.

Departments and Units are strongly encouraged to designate one or more individuals to act as liaison to the Library Systems & Technology Department and relay information to the rest of the Department or Unit, and to identify the designee(s) to the Library Systems & Technology Department. Service calls may be initiated by any member of the Libraries staff, and is not limited to identified liaisons.

Service call requests (hereto after Calls) should be made to the Library Systems & Technology Department via *WINGSS*, by electronic mail, by telephone, or in person at the following contact points:

- *WINGSS on Snowy* is available via the web at:
<http://snowy.lib.temple.edu/wingss/>
- The Department electronic mail address is:
helpdesk@library.temple.edu
- The Department Help Desk telephone number is:
1-6572
The Help Desk telephone is answered from 8:00am-5:00pm Monday through Friday.
- The Systems & Technology Department offices are in:
Paley Library Rooms 111-112

Calls reported by any method are logged into *WINGSS* where they are linked to the caller's login. There, the caller is able to view all pertinent information about the call including assigned Support Specialist, priority, due date, and notations regarding progress toward resolution. For more information, read "Tracking Calls with *WINGSS* on Snowy," available from the intranet at <http://snowy.lib.temple.edu/WINGSSDocs.pdf>.

All Calls should be made via one of these four (4) methods. Calls made directly to individuals are strongly discouraged. Only the individual has access to his/her personal electronic mail or voice mailbox rendering them inaccessible to other members of the Department in the event of that person's absence. Direct communication with an assigned Support Specialist regarding specific service calls is always welcome and encouraged.

II. MISSION-CRITICAL SITUATIONS

Mission-critical situations such as integrated library system failures, crashes of critical shared systems, or hazardous or endangered equipment should be reported to the Library Systems & Technology Department by telephone or in person. Avoid reporting emergency situations by *WINGSS* or electronic mail. Speak to a live person in real time.

Mission-critical situations are addressed immediately and at the expense of other projects and calls.

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III. NETWORKED AND SHARED SYSTEMS

Problems with networked and shared systems such as networked CDs, large groups of public computers, may be reported by *WINGSs*, electronic mail, telephone, or in person. A Service Call Request will be entered into *WINGSs* for all calls placed by any method, and an acknowledgement sent that day.

A. Network Connectivity Problems

Staff should notify the Library Systems & Technology Department by telephone in the event of network connectivity problems. Additionally, those persons not located in Paley Library should notify Computing & Information Services personnel assigned to their building or campus, since they may have information unavailable to the Library Systems & Technology Department.

Staff may also contact the Network Operations Center at 1-8000 for information regarding campus network status. Network connectivity problems should not be reported by electronic mail.

B. Diamond Issues

For known, verified problems, personnel on the established contact list should contact Innovative Interfaces (III) directly to report non-system-wide issues concerning Diamond, and notify the Library Systems & Technology Department of any open calls. Others should report issues to the appropriate contact person. III will notify the caller and the site coordinator when a call is opened or closed.

For issues that may not be a bona fide problem, please submit a help desk inquiry for verification of problem status.

C. User Education Classroom

This equipment should be tested at least two (2) days prior to giving a class to ensure that Library Systems & Technology Department personnel have time to fix the problem before the class. Persons using this classroom should promptly report any problems to Library Systems & Technology Department by telephone or in person if a class is pending, or by any means otherwise. Assistance prior to use of the classroom can be pre-arranged with the Systems Librarian or Head of Library Systems & Technology.

IV. COMPUTER HARDWARE AND SOFTWARE

Service calls for individual hardware components or software support should be placed in accordance with the general guidelines above. A Service Call Request will be entered into *WINGSs* for all calls placed by any method, and an acknowledgement sent that day.

A. Staff Hardware, Software, and Peripherals

Staff are responsible for reporting any issues regarding their assigned computing equipment to the Library Systems & Technology Department. Problems may be reported by the individual user or by a designated member of the Department. Help desk personnel may attempt to resolve any service call by telephone. Staff placing service calls by telephone are encouraged to be at the computer being reported.

B. Public-Access Computers

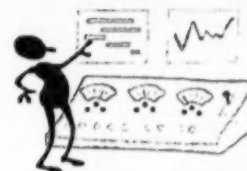
Any staff person noticing problems with public-access computers in Paley Library should notify the Library Systems & Technology Department. In the other libraries on the main and suburban campuses, "[d]esignated staff in the appropriate Department will examine public access workstations regularly for extraneous software, possibly loaded by users; visible physical damage; and unusual hardware or software behavior." (University Libraries *Computing and Software Policy*). Problems with individual public-access computers should be reported to the Library Systems & Technology Department in accordance with the general guidelines above.

V. OTHER SITUATIONS

Unusual situations not fitting the above should be called to the attention to the Systems Librarian or Head of Library Systems & Technology, and will be handled on a case-by-case basis.



Library Systems & Technology Department
Tracking Calls with WINGSS on Snowy
November 12, 2001
 Revised April 9, 2002



WINGSS on Snowy is the Library Systems and Technology Department's help desk and asset management system, powered by *Track-It!* from Blue Ocean Software. Library staff can use *WINGSS on Snowy* (*WINGSS* for short) to log their own service requests, search the solutions database, and view their existing work orders with any standard web browser, and without having to call or wait for an electronic mail reply. These procedures are prepared to assist Libraries staff in the use of *WINGSS*.

LOGIN AND OPTIONS

WINGSS may be reached from the Libraries Intranet through the URL:

<http://snowy.lib.temple.edu/wingss/>

At the login page, enter your **last name**, your Temple AccessNet, or your e-mail login into the username field. Select a **password** and enter it into the password field. Click the Submit button.

If this is your first time using *WINGSS*, you will be taken to the Auto Create screen. Re-enter your password and click OK (If you see the message "[USERNAME] Login ID already exists. Please select another," use your last name and first initial or initials, e.g., KINGML). From now on, you will be taken directly to the Options page each time you log in.

Hyperlinks at the top of the Options page and all others allow you to:

- Change your Password
- Show or Hide the Contents navigational menu at the left of the screen
- Get information about the application (About)
- Access the *WINGSS* Help
- Sign-off to leave the online application

A general site map gives brief descriptions of *WINGSS* options. These are described in the following sections.

NEW REQUEST: SUBMIT A NEW REQUEST FOR SERVICES

This option allows you to submit new requests for services such as problems, installations, and requests for training. When the request is logged, a work order is generated with the information entered on your request and some additional information. As work orders are completed, they are added to the work order history for your PC so that support staff can track the activity on your system.

To create a new work order:

1. Click on New Request in the Contents list. Your name is automatically entered in the Requestor field.
2. Type a short description of the problem or request in the Summary field. (You can add more details in the Description box at the bottom of the form.)
3. Enter your **e-mail address** (name@temple.edu) in the E-mail field (ignore the text that says, "Phone # of person making request." We'll try to change that at some point in the future).
4. Select the Type and Priority from the options in the drop-down lists based on the type of action required. (Your installation governs the options in these fields.)
5. Click on ASAP or enter a requested completion date. (This is logged as a request. The actual time allotted is governed by the Type and Priority combination above. See the document *Guidelines for Service Call Prioritization* for further information)
6. Describe the problem or request in more detail in the Description field.
7. Click on Save to create a new work order in the system.

A Request Confirmation displays to confirm receipt of the work order and provide the work order number.

PREVIOUS REQUESTS: LIST AND UPDATE PREVIOUS REQUESTS

This option allows you to see all work orders currently in the system for your login (requestor). To view your previous requests:

1. Click on Previous Requests in the Contents list.
2. Click on a request to see the details of the request.
3. Click on OK to close the detail view of a previous request and return to the list view.

SOLUTIONS: SEARCH THE SOLUTIONS DATABASE

If you are troubleshooting a problem on your system, you can access the Solutions database.

1. Click on Solutions in the Contents list.
2. If they aren't automatically checked, click on the Summary and Details checkboxes.
3. Enter a word or phrase in the "Search For" field.
4. Click on the Search button. The system returns all information available.
5. Click on the summary lines to see the type and details of the solution.
6. Click on Cancel to return to the main view.

NB: This database is populated manually by the Systems and Technology Department staff, based on commonly occurring problems. It will contain more information, and thus become more functional, as the help desk system is more frequently used.

MY COMPUTER: VIEW INFORMATION ABOUT YOUR WORK STATION

The My Computer icon in the Contents list gives you quick access to a detailed view of information on the PC associated with your name. Information includes user name, workstation, department info, phone numbers, hardware details, and software details.

Use of this feature requires a prior use of the Web Audit option and an additional set-up. Both are outlined below.

HOME: RETURN TO HOME PAGE

The Home icon takes you to the Systems and Technology Support Page. The page will appear within the **WINGSS** window, so that you always know that you're logged in.

WEB AUDIT: RUN WEB AUDIT

This powerful feature collects technical data and settings from your PC. When you submit a work request after running the audit, the technician can access your PC's information via the web to better address any difficulties. This option also allows you to make use of the My Computer option above.

1. Click on the Web Audit icon.
2. Click on the Audit My PC button. The system displays the files being captured and returns a Completed message when the audit is finished.
3. There are two views of information available to you: a summary view and a detailed view. Click on the Summary/Details button to toggle between the two views. If you are in the summary view, click on an icon in the tree to see more details.
Click on Close to return to the main **WINGSS** views.

To be configured to use the "My Computer" option:

1. Immediately after running Web Audit, click the "Details" button and expand the "Network" view.
2. Make note of the "Computer Name" and "User Name" (if any).
3. Enter a service call to link the Computer Name and User Name (if any) to your **WINGSS** login (be sure you indicate them all). Give the request a "Type" of "Help Desk/Intranet."

QUESTIONS AND FURTHER INFORMATION

Contact the Systems and Technology Department by e-mail (helpdesk@library.temple.edu) or phone (1-6572) with any questions you may have regarding **WINGSS**.

SPEC Kit 271

Library Systems Office Organization

Evaluation



The Library

www.library.ubc.ca

Information for Implementing the Library Strategic Plan Results of User Focus Groups

Condensed Version of Report of March 8, 2002

Prepared for:
UBC Library

Prepared by:
Points of View
Research & Consulting Ltd.

April 18, 2002

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Appendix

Discussion Guide

Summary of Results

Purpose and Design of the Research

Management and staff of UBC Library are implementing changes in operations and services based on the strategic plan that was completed in the spring of 2001. Research with users was needed to provide up-to-date information on several timely issues to support upcoming implementation decisions and activities. Points of View Research & Consulting Ltd. was contracted to carry out focus groups with UBC Library users.

The study design consisted of eight focus groups with faculty, graduate students, and undergraduates in Sciences/Medicine/Technology, Professional Schools, and Arts. The participants were frequent users of library resources and services, including electronic access. They represented a wide range of disciplines, and included both males and females and a variety of cultural backgrounds. A total of 56 people participated in the focus groups.

UBC Library staff selected the participants for the study and invited them to attend the discussions. The sessions were held on February 5, 6, 12, 13, and 14, 2002, and took place in the 7th floor boardroom of Koerner Library and the Sherrington Room of Woodward Library. The discussion guide was developed in consultation with UBC Library staff and may be found in the Appendix of this report.

The main purpose of the study was to obtain feedback, preferences and suggestions from users on their communication with Library staff, access to full-text electronic journals and books, perceived need for education in information literacy, and on Library loans policies.

This report is a condensed version of the full report and summarizes the main results of the study. It has been organized by the area of responsibility of the four Library Task Groups that submitted topics for the study. The Task Groups were: Full-text Access (Task Group 1.6), Information Literacy (Task Group 2.1), Communication Methods (Task Group 1.4), and Loan Policies (Task Group 2.7).

Any verbatim comments of focus group participants have been italicized. Some of these quoted statements have not been reproduced in their entirety, and a few have been modified slightly to aid comprehension.

Statement of Limitations

The focus group method was chosen because of its flexibility in obtaining primary information from members of a certain population. Focus groups are particularly useful for topics where the nature and intensity of respondents' reactions are unknown, and where it is important to identify the motivations, thought

processes, and feelings associated with attitudes and behaviours. Qualitative techniques offer the advantage of yielding detailed information on the topics under review.

It must be remembered, however, that the results of qualitative research are not quantitative conclusions and, thus, cannot be used to estimate the size of any particular group. The findings reported here were drawn from a small sample of UBC faculty and students.

Full-text Access (Task Group 1.6)

Following are the main results on full-text access to electronic resources and users' perceptions of the direction UBC Library should take in providing full-text resources.

1. Nearly all users are using ejournals, but in comparison with ejournals, ebooks are used less frequently by fewer users.
2. Most users of full-text ejournals download and print all or some of the document. Few users are reading ejournals online, except to briefly scan the document to decide whether they want to keep or use it. Some users are not printing articles immediately but are instead building computer files containing papers of interest for use at a later date, with indexing for cross-referencing. Emailing an ejournal article to another computer or to a colleague or fellow student is not uncommon.
3. Most users of full-text ebooks are using reference materials and are using them online. Suggestions for ebooks that users would like to access included engineering, statistics and mathematics handbooks, writing/publishing style guides (e.g., MLA, APA), textbooks and other books in course reserve, hard-to-find books, and books that are in high demand or for which few copies are available.
4. Unless users already know that a journal title or the year of a particular journal is not available in electronic format, they tend to prefer to use the online format. There are those who still prefer print though, especially for browsing and keeping up-to-date in their field.
5. Opinions were divided on the question of print or online formats if only one format could be chosen for journals. Many participants, regardless of discipline, said "both" when asked their preferred format. In general, Library users in science, medicine and technology fields preferred online formats, but some arts faculty as well as other participants expressed concerns about relying on electronic resources because of:
 - a limited ability to browse,

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http://www.library.ubc.ca/home/focus_group.pdf

- difficulties in footnoting and other research uses, because page numbers can vary from the print version,
 - unavailability when a personal computer or server is down,
 - a risk that the collection for a particular journal series will be incomplete,
 - unknown availability in the future due to changing electronic formats and the possibility of future incompatibilities or that a remote acquisition source for a particular resource could change hands or disappear, and
 - price increases could make this format unaffordable in the future.
6. Faculty had some concerns for students resulting from moving more and more to an electronic environment, and these included:
- offloading printing costs on students,
 - students forgoing the opportunity to browse Library shelves and make serendipitous discoveries, and
 - students becoming frustrated with conducting Library research and relying on too much on the Web, because it is far easier to *Google a topic* and find material than it is to spend the necessary time learning search skills and how to properly use the catalogue and access databases.
7. Faculty tended to be a bit skeptical about the usefulness of being able to view subject lists of all full-text electronic resources, including ejournals and ebooks, by broad subject area or discipline. This appeared to be mostly due to feeling that the subject areas would be too broad, and they were already familiar with where to find most of what they needed. In contrast, students, especially those with less experience using the catalogue and with less knowledge about what a user could expect to find in various resources, reacted favourably to organizing full-text electronic resources by broad subject areas or disciplines.
8. When asked if they would like to search for all resources, regardless of format, in a single search box versus search for full-text electronic resources in a separate search box, the majority of users preferred having both options. In general it appeared that if they had both search options, many would search for full-text electronic resources first and then, if necessary, search all resources.
9. The developments users would most like to see UBC Library provide in full-text online resources are to make the entire electronic system easier to use by solving the problems of multiple authentications and user difficulties in finding resources and knowing what's there, and to increase the titles and years of publication that are available as ejournals.

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Typical Usage Behavior

At the outset of some of the focus groups, participants with a long association with UBC were asked what changes in the Library over the years stood out for them. The two most frequently mentioned changes were the building of Koerner Library and the increasing use of electronic means for getting information. The advantages of electronic access to full-text resources were alluded to many times in the discussions and included:

- reliable access by eliminating the possibility that the journal is not on the shelf for some reason,
- speedy and convenient access from one site,
- the number of simultaneous users is not determined by the number of hard copies at Library buildings,
- research can take place anywhere at anytime,
- flexibility in options for downloading, printing, saving or printing portions, emailing, saving in a computer file with other papers for future use, and
- less costly and more convenient printing.

Nearly all Library users are using full-text ejournals for reasons of convenience, although a few faculty members and students said they rarely used them - mostly because the journals they use have not been converted to electronic format. Most users download and print all or some of the document. Few users are reading ejournals online, except to briefly scan the contents of a particular article to decide if they want to keep or use any of it. Emailing an ejournal article to another computer or to a colleague or fellow student is not uncommon with faculty members and graduate students but is rarely done by undergraduates. A few undergraduates were aware that they could email an article but said they tried and were not successful, or they didn't try because there is a limit to the size of a document that can be emailed or they prefer to print it at the Library. Some users are not printing articles immediately but are instead building computer files containing papers of interest for use at a later date, with indexing for cross-referencing.

Ebooks are used with less frequency and by fewer Library users than ejournals. A few participants were unaware of ebooks and asked what they were. Suggestions for new ebooks came mostly from students, and most requests were for reference materials. Students would also like to have access to other high demand or limited copy resources, such as textbooks and materials in course reserve. Users cautioned, especially regarding reference books, *Don't take them off the shelf though*. Suggestions for ebooks included:

Handbooks, e.g., engineering, statistical and mathematical formulae
Chicago Manual of Style
APA style book

Points of View Research & Consulting Ltd.

- MLA style book
- Encyclopedia of Life Sciences
- Canadian Abridgement
- Renaissance Women
- Handbook of Qualitative Research.
- Handbook of Qualitative Interviewing
- Airline databases
- Early literature
- Out-of-print editions and translations
- Hard-to-find books
- Books that are considered classics for particular fields
- Fiction

Preferences for Format

Overall, users tend to prefer to use the online format unless they know that a journal is not electronically available or wish to read an article published earlier than the past five years. There are those who still prefer print though, especially for browsing and keeping up-to-date in their field. Some people also derive a great deal of aesthetic satisfaction from holding and reading hard copy books and journals.

Opinion was divided on the question of print or online format if only one format could be chosen. Library users in science, medicine and technology fields tended to choose the online format, but some users in the arts, with the possible exception of arts undergraduates, tended to choose print. Many people, regardless of discipline, said "both" when first asked their preferred format.

Concerns were voiced about exclusive reliance on electronic formats, and these included a limited ability to browse, difficulties with footnoting and research because the page numbers can vary from the print version, unavailability when a computer or server is down, a risk that the collection for a particular journal will be incomplete, unknown availability in the future due to changing electronic formats and the possibility of future incompatibilities, and a remote acquisition source for a resource could change hands or disappear. Also, concerns were raised about price increases down the road for online resources, once university libraries commit to the full-text online format over print.

On the other hand, users acknowledged there were problems with printed journals too, such as anchoring to prevent theft, unavailable volumes in a series because they had been lost, stolen or were being rebound, and damaged volumes with missing pages or articles.

Preferences for Listing by Subject Area and Access Options

Strong interest was found in undergraduate students and some graduate

students for being able to view all full-text electronic resources by broad subject area or discipline. They likened this way of organizing materials to exploratory browsing, and pointed out that browsing of print resources in the Library is not ideal, because all of the holdings are never on the shelves at any given time. They want to be able to scroll the collections online too. Faculty tended to be a bit skeptical about the usefulness of being able to view lists of all full-text electronic resources, including ejournals and ebooks, by broad subject area or discipline. This appeared to be mostly due to the feeling that the subject areas would be too broad and because they were already familiar with where to find most of what they needed.

Problems and Concerns

Faculty had concerns, mainly for students, as the Library moves more and more to an electronic environment, and these included:

- offloading printing costs on students,
- students forgoing the opportunity to browse Library shelves and make serendipitous discoveries, and
- students becoming frustrated with conducting Library research and relying too much on the Web, because it is far easier to *Google a topic* and find material, than it is to spend the necessary time learning search skills and how to properly use the catalogue and access databases.

Students also commented favorably on discoveries they had made when they visited a Library and browsed through other resources in the same area of the shelf as the book they wanted to borrow.

Users accessing UBC Library from home described a number of problems with electronic access. These problems were mainly:

- setting up the proxy server,
- the slowness of the connection,
- not having PIN numbers or access codes that work, and
- links that block users.

Future Directions

Clearly the number one issue of some faculty members for UBC Library is their deep concern about shrinking collections. These were mostly older scholars with a long association with UBC and an historical perspective on this particular library that allowed them to compare and contrast the current Library with the past Library.

Library Gateway Focus Groups Report

January 1999

Prepared by Karen Calhoun and Zsuzsa Koltay
Assisted by Diane Cellentani of Marketing Backup
Research supported by a 1998 CUL Internal Grant

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Conclusions and Recommendations

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Table 1: Summary of Web Sites of 9 Largest U.S. ARLs and 3 Peer Libraries

University of Michigan
University of Pennsylvania
University of Illinois at Urbana-Champaign
Dartmouth
Brown
University of Texas at Austin
Stanford
UCLA
UC Berkeley
Columbia
Yale
Harvard

Appendixes: Interview Guide, Marketing Backup Report

(Contact: Karen Calhoun)

Cornell University Library Staff Web Page

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Library Gateway Focus Groups Report

January 1999

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Research supported by a 1998 CUL Internal Grant

Executive Summary

"The Gateway is the best [information system] I've ever used, but it is less than optimal. It is a great mock-up of the future." (focus group participant)

This report summarizes the results of a focus group user study that was conducted in November 1998 to assess how the Library Gateway is being used; to ascertain the Gateway users' satisfaction levels, likes and dislikes; to determine enhancements for the current Gateway; and to identify future improvements for CUL's common entryway. To place the research into the context of what is happening at other peer institutions, it also contains a summary and brief evaluation of the Web sites of a dozen large academic libraries.

A tool for collecting in-depth, thoughtful feedback, focus groups represent a qualitative rather than a quantitative research methodology. Focus group interviewing was a natural choice for this study as it is well suited to studying needs, perceptions, satisfaction, and user expectations. This method overcomes the limitations of pre-determined, closed-ended questions used for surveys and often yields insightful, in depth results. Our study used six focus groups to gather user feedback and suggestions: two each of faculty/graduate students, two each of undergraduate students, and two each of library staff members.

While our results are not statistically representative (they may or may not reflect the attitudes of all users), they do suggest that:

- Users want CUL to better communicate with them about both the existence of the Gateway and enhancements to the system and collection.
- Undergraduates use the Gateway when they do papers; faculty and graduate students use it more frequently, and they prefer access from their offices.
- The primary use of the Gateway is networked resources.
- Patrons rarely consult Gateway Help. When they do, they find it is not helpful, or they get lost.
- Users have much praise for CUL and its librarians.
- Full text is extremely popular.
- Undergraduates use both keyword searching and Gateway subject captions to retrieve Gateway resources. Faculty and graduate students are more likely to do known item searching and to use only a handful of databases in their specialties.
- Most patrons are satisfied with the Gateway. They like having a common entryway, full text, easy remote access, the variety of databases, online services, the ability to save time, and the excellent support they get from librarians.
- The least popular aspects of the Gateway are confusing keyword searching, multiple interfaces, not understanding how to use the Gateway, and lack of integration with the OPAC (especially for holdings information).
- The Gateway can be overwhelming. Many find the process of selecting a database confusing. Users want more shortcuts, more direct access to the databases they consult frequently, and more prominence given to the catalog (and they want the catalog on the Web).

The following overarching themes emerged throughout most sessions:

- 1) Overall, users are very satisfied with both CUL and the Gateway. They are highly appreciative of the rich collections and outstanding services that they feel they receive.
- 2) Many of the difficulties that users have with the Gateway stem from the fact that the Gateway presents networked resources and services but it does nothing to simplify the complexity of today's information scene. Web users expect simplicity and are baffled when they realize that they need library and research skills to translate between their information needs and the genre, subject and database choices they have to make on the Gateway.
- 3) Users appreciate the richness that the Gateway offers for all subjects, but they yearn to have a more personal space. If they cannot "rearrange the furniture" in the entire system, at least they would like a little corner to themselves where they can dictate how important certain resources are based on their own needs. The idea of a personalized "Greatest Hits" and subject-specific "What's new" came up in several focus groups.
- 4) Users want to be in closer communication with the library. They feel that the library provides great services for those who happen to find out about them and teach themselves how to use them. They would like us to be more proactive about letting them know about collections and services and teaching them how to use them.

Based on our findings we recommend that CUL take the following steps to enhance its common entryway:

- Enhance user awareness and training.
- Continue to add resources, especially full-text and e-journals.
- Improve keyword searching.

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- Expand the ways of "slicing and dicing" the collection of networked resources such as allowing an easy way to identify e-journals as a subset or resources.
- Explore new ways and technologies to simplify the task of navigating a complex information scene.
- Provide more prominence to and integration with the OPAC.
- Make the search results display more concisely, clearly, and ranked, especially for databases with multiple interfaces.
- Provide personalized and current awareness services.
- Add new features to the Gateway such as what's new, hot topics, favorite databases, and subject guides.
- Continue to allow for both searching and browsing for networked resources (i.e., keyword/title search and subject-based browse.)
- Continue to provide both Web and telnet access to databases (especially the OPAC.)
- Continue to add new services such as multimedia tutorial, "chat" help and reference, fee-based e-mail document delivery.
- Provide a common search engine and simultaneous searching of multiple databases.
- Continue to make Networked Resources highly visible as a separate category even after integration with the LMS. (see the University of Michigan model)
- Involve users with testing and designing "help" and other aspects of the system.
- Provide prominent links to Web search engines.
- Conduct a study of non-users.

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OSUL IT Customer Feedback Form

Comments about our services are welcomed; please complete the form below to provide feedback about the quality of our service. The completed customer service form will be forwarded to Donna Kosch (ASD) for tabulation on behalf of the Information Technology Division.

Service Requested By: _____ Date / Time of Service: _____

Library Location: _____

Name of IT staff/student who provided service: _____

Service Performed: _____

Please Provide The Following Important Feedback:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	N/A
We provided timely service	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐
We provided appropriate communication about your request	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐
We acted in a polite and courteous manner	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐
The actual solution or service supplied was satisfactory	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐
Overall, our service met your expectations	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐

***Would you like someone to follow-up with you**

☐ Yes ☒ No

Your Name: _____ Email Address: _____

Additional Comments: _____

Submit

Reset form

JEAN AND ALEXANDER HEARD LIBRARY*NetFix*

Quality of Service Questionnaire

You recently reported a problem or request through NetFix which, according to our records, has been resolved. Please help us improve our service by responding to this follow-up questionnaire. Please remember to limit your response to this one request or problem only. We appreciate your feedback.

Your name: Lastname, Firstname

The Problem Tracking System number for this case: _____

(In our initial response to your request you should have received a Pegasus Mail message giving you this PTS number.)

This problem or request has been resolved to my satisfaction: (☐ Yes ☐ No)

Which person from the library technology group resolved this problem or request? (...please select one...)

How quickly was your problem resolved? _____ Day(s)

Was this problem resolved:

- ☐ Sooner than I expected
☐ About the same as I expected
☐ Longer than expected

How did we communicate with you regarding this problem or request:

- ☐ Well. I had plenty of information about how this issue was being dealt with.
☐ OK.
☐ Poorly. I felt like I did not have enough information

Please add any other comments you have about how you perceive that this problem or request was resolved:

--

Thanks for your feedback.

this request, the form or return to [Library Technology](#) page.

If you have difficulties, send email to netfix@library.vanderbilt.edu.

Last updated March 25, 1999.

[[Vanderbilt University](#) | [Heard Library StaffWeb](#) | [Library Technology](#)]

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SPEC



SELECTED RESOURCES

ASSOCIATION OF RESEARCH LIBRARIES



OFFICE OF LEADERSHIP AND
MANAGEMENT SERVICES

120

SPEC Kit 271

Library Systems Office Organization

Books

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Authors' note: There is a dearth of substantial, recent resources covering the specific topics of library systems office organization, management, and roles. These subject areas are in need of more study and research.

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Note: All Web sites accessed November 18, 2002.

SPEC KIT ORDER FORM

QTY TITLE

QTY TITLE

QTY TITLE

_____ SP271 Lib Systems Office Organization
 _____ SP270 Core Competencies
 _____ SP269 Integrating Preservation Activities
 _____ SP268 Reference Statistics
 _____ SP267 User Authentication
 _____ SP266 Staffing the Library Website
 _____ SP265 Instructional Support Services
 _____ SP264 Extended Library Hours
 _____ SP263 Numeric Data Services
 _____ SP262 Preservation & Digitization
 _____ SP261 Post-Tenure Review
 _____ SP260 Interview Process
 _____ SP259 Fee-based Services
 _____ SP258 Corporate Annual Reports
 _____ SP257 MLS Hiring Requirement
 _____ SP256 Changing Roles of Lib Profs
 _____ SP255 Branch Libs/Discrete Collectns
 _____ SP254 Managing Printing Services
 _____ SP253 Networked Info Services
 _____ SP252 Supprt Staff Classificn Studies
 _____ SP251 Electronic Reference Service
 _____ SP250 TL10: Educating Faculty
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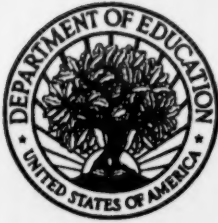
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